



AGENCY COMMENT REQUEST

Date 8/10/26

We request your comments regarding the attached application currently under review.

DISTRIBUTION

INTERNAL

☒ Building Inspection Grading Inspection
Advance Planning Housing Programs
Trans. Planning Telecom Planner
ALUC Staff HCP/NCCP Staff
County Geologist

HEALTH SERVICES DEPARTMENT

☒ Environmental Health Hazardous Materials

PUBLIC WORKS DEPARTMENT

Engineering Services Special Districts
Traffic
Flood Control (Full-size)

LOCAL

Fire District _____
San Ramon Valley – (email) rwendel@srvfire.ca.gov
☒ Consolidated – (email) fire@cccfdpd.org

☒ Sanitary District West County Wastewater
☒ Water District EBMUD
☒ City of Richmond
School District(s) _____
LAFCO
Reclamation District # _____
East Bay Regional Park District
Diablo/Discovery Bay/Crockett CSD
☒ MAC/TAC East Richmond Heights MAC
Improvement/Community Association
☒ CC Mosquito & Vector Control Dist (email)

OTHERS/NON-LOCAL

CHRIS (email only: nwic@sonoma.edu)
CA Fish and Wildlife, Region 3 – Bay Delta
Native American Tribes

ADDITIONAL RECIPIENTS

Please submit your comments to:

Project Planner Nai Saephan
Phone # 925-655-2874
E-mail nai.saephan@dcd.cccounty.us
County File # CDVR26-01022
Prior to Sept. 8, 2026

We have found the following special programs apply to this application:

Landslide ☒ Active Fault Zone (A-P)
Liquefaction Flood Hazard Area
60-dBA Noise Control
CA EPA Hazardous Waste Site
☒ High or **Very High FHSZ**

AGENCIES: Please indicate the applicable code section for any recommendation required by law or ordinance. Please send copies of your response to the Applicant and Owner.

Comments: None Below ____ Attached

Print Name _____

Signature _____ DATE _____

Agency phone # _____



CONTRA COSTA

CONSERVATION & DEVELOPMENT

Planning Application Project Summary

County File Number: CDVR26-01022

Submitted Date: 8/7/2026

Applicant: Russ Dotter

Property Owner: TURNER BOHLEN

Project Description:

The applicant is seeking variance approval authorizing a 13' 8" rear yard (where 15 feet is the minimum required) for a 36 square foot addition to the southeastern (rear) corner of an existing single-family residence.

Project Location: (Address: 5932 PARK AVE, RICHMOND, CA 94805 116), (APN: 418121017)

Additional APNs:

General Plan Designation(s): RM

Flood Hazard Areas: X

60-dBA Noise Control:

Sphere of Influence: Richmond

Sanitary District: WEST CO WASTEWATER

Specific Plan:

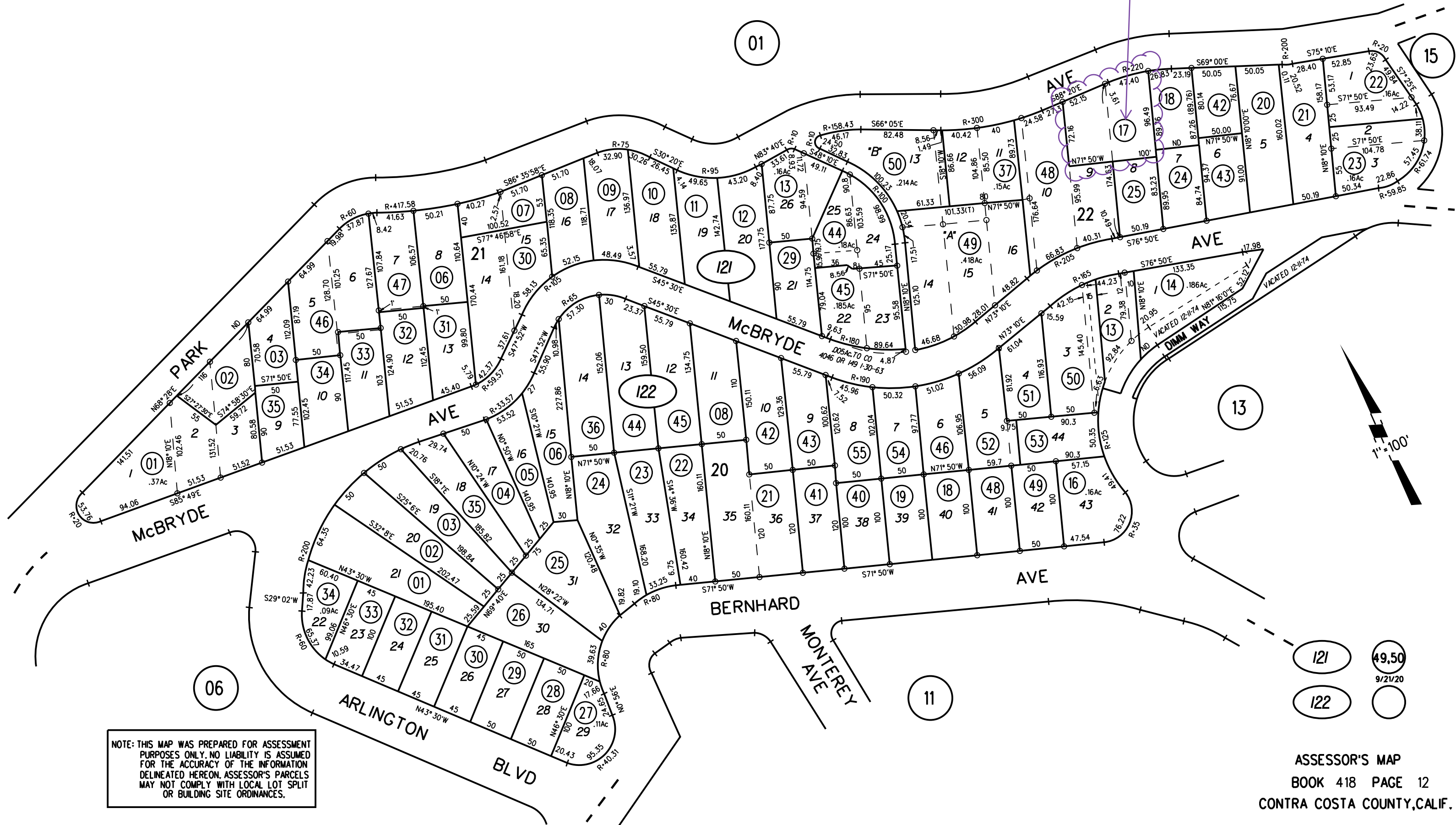
Zoning District(s): R-6

AP Fault Zone:

MAC/TAC:

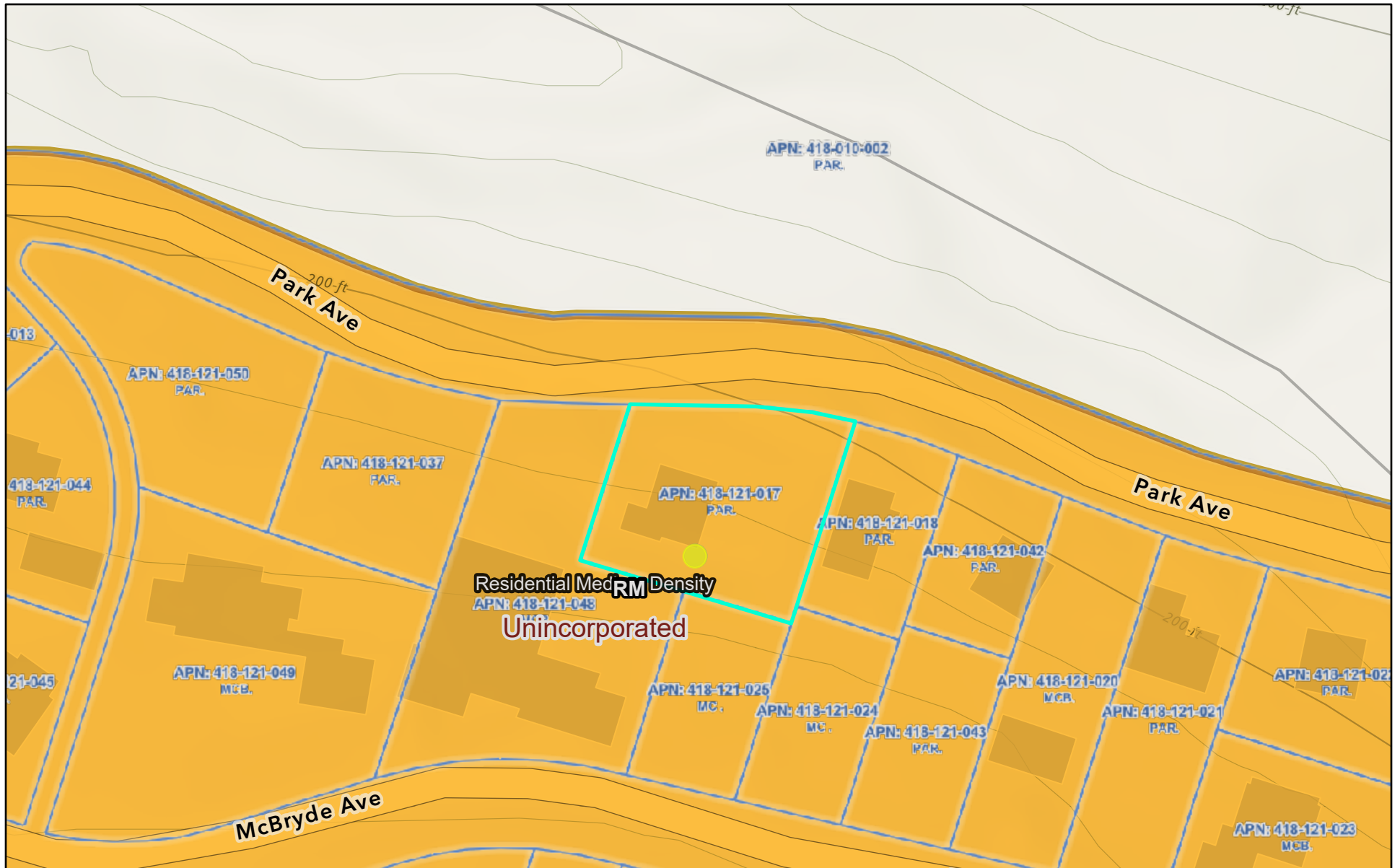
Fire District: CONSOLIDATED FIRE

Housing Inventory Site: NO

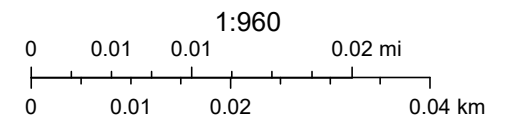


ASSESSOR'S MAP
BOOK 418 PAGE 12
CONTRA COSTA COUNTY,CALIF.

General Plan: RM - Residential Medium Density

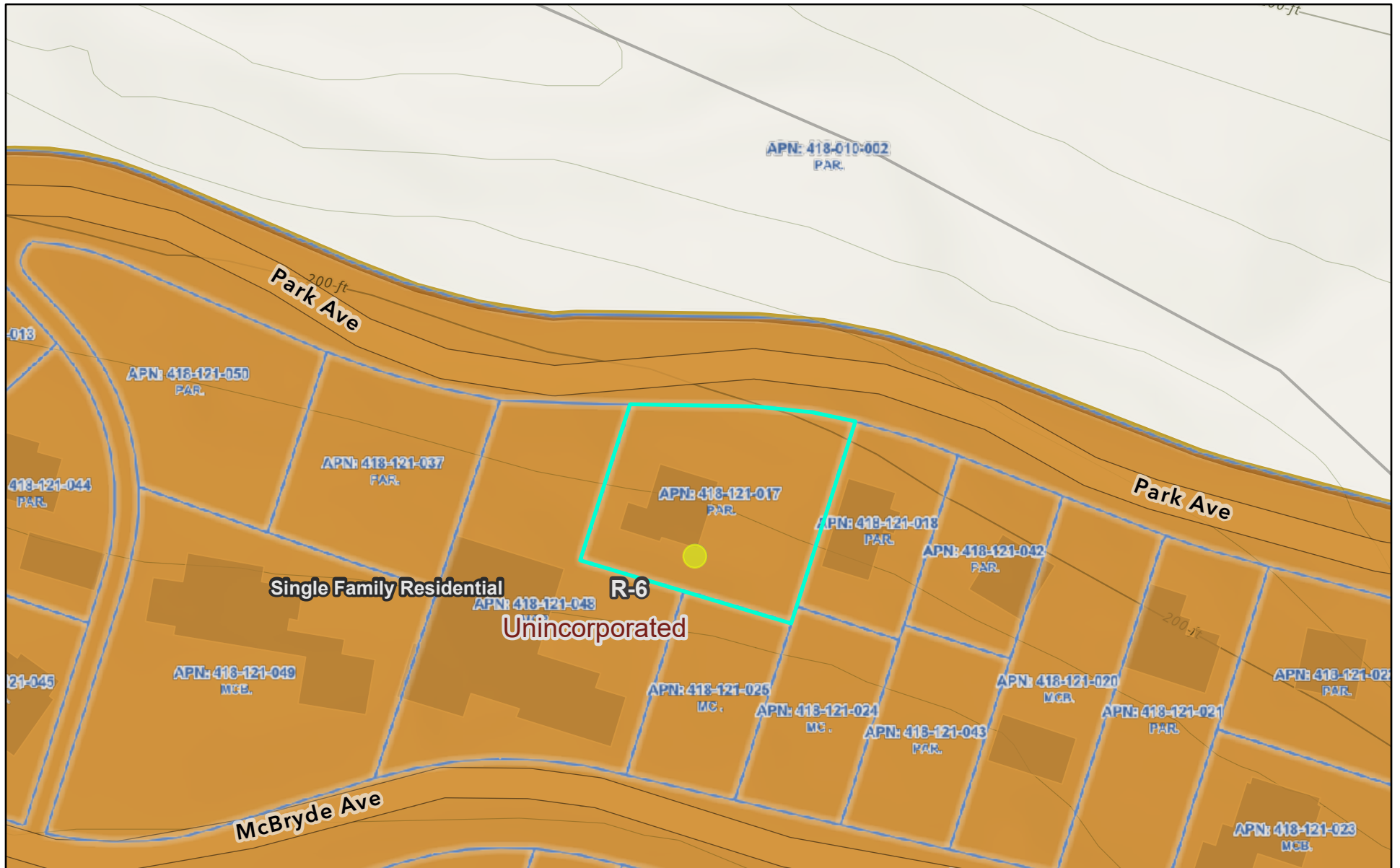


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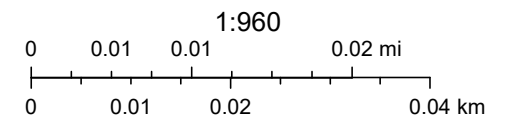


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Contra Costa County Department

Zoning: R-6 Single Family Residential

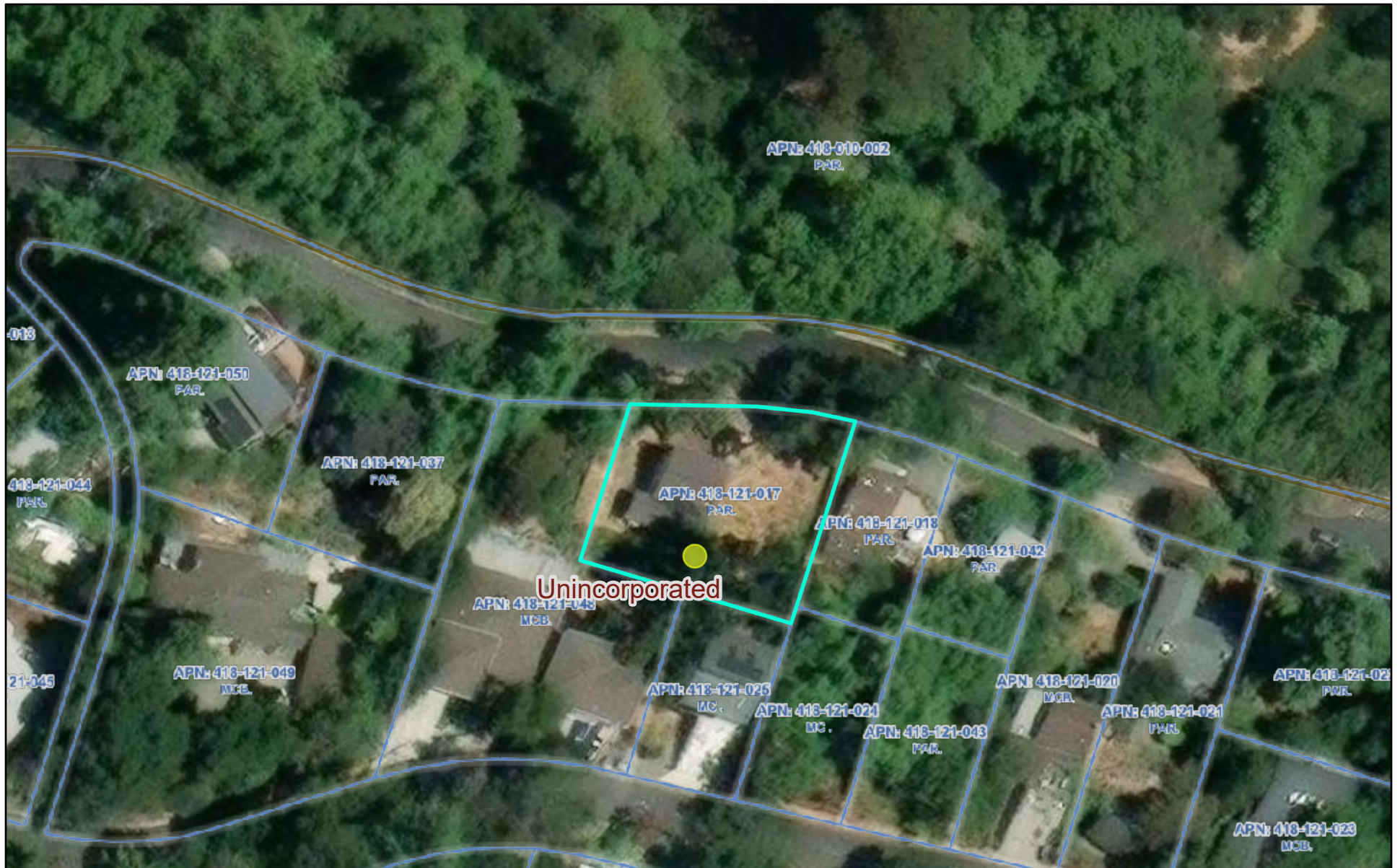


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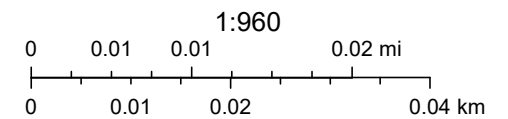


Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Contra Costa County Department

Orthophotography



8/7/2026, 3:32:02 PM



Esri, HERE, Garmin, IPC, Contra Costa County Department of Conservation and Development, Contra Costa Local Agency Formation Commission

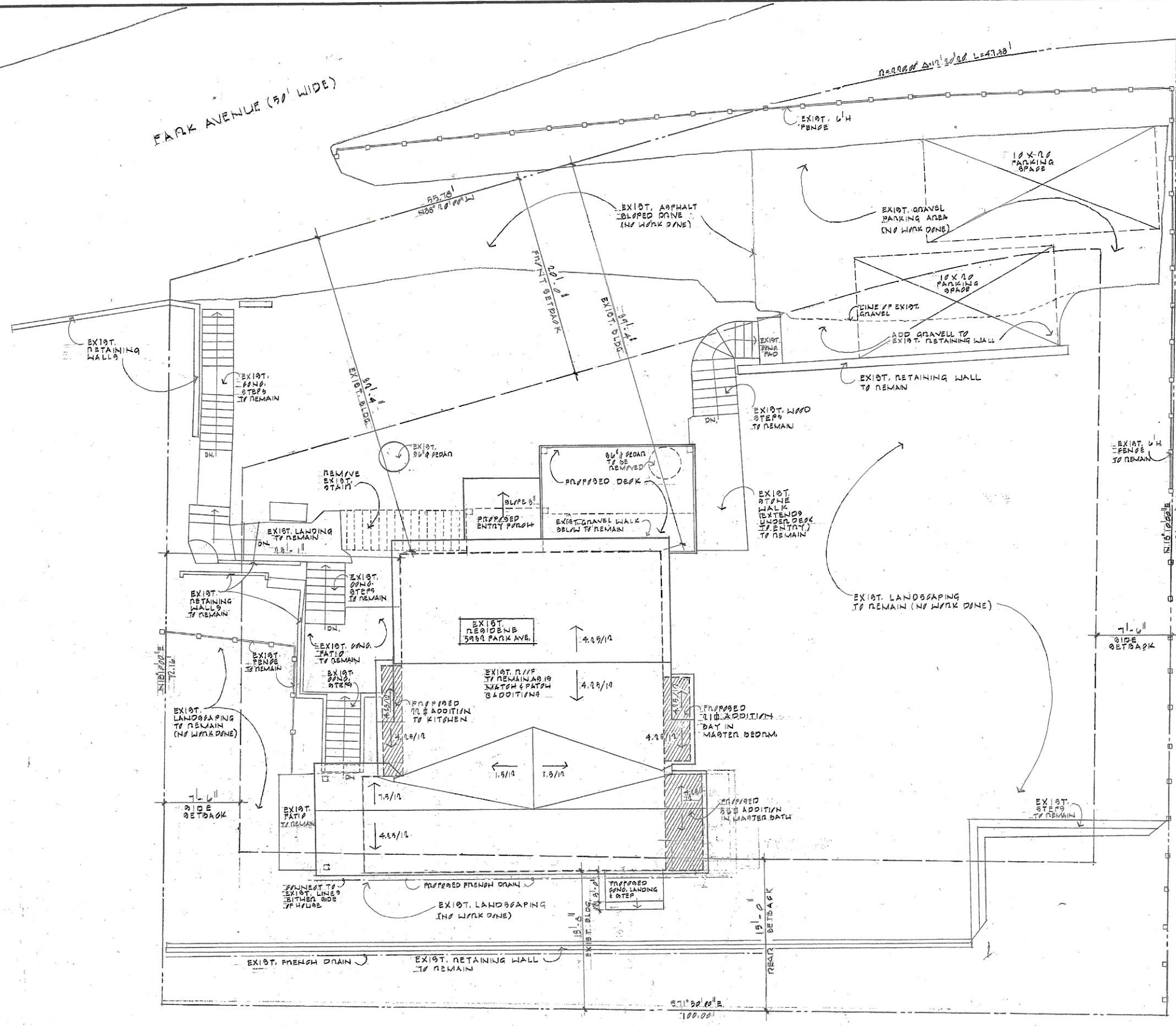
RECEIVED on 08/07/2026 **CDVR26-01022**
By Contra Costa County
Department of Conservation and Development

SHEET INDEX

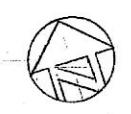
A1	SITE PLAN / PROJECT INFORMATION / SHT. INDEX
B0	TOPOGRAPHIC SURVEY
A1	EXISTING FLOOR PLANS
A0	PROPOSED UPPER AND LOWER LEVEL FLOOR PLANS
A4	EXISTING AND PROPOSED SECTIONS, MISS. DETAILS
A9	EXISTING EXTERIOR ELEVATIONS
A6	PROPOSED EXTERIOR ELEVATIONS
A7	WINDOW AND DOOR SCHEDULES / WINDOW / DOOR DETAILS
A0	ROOF AND MISS. DETAILS
A9/A10	INTERIOR ELEVATIONS
E1	UPPER / LOWER LEVEL ELECTRICAL PLANS LIGHT FIXTURE SCHEDULE
B7/24	TITLE 24
B2	STRUCTURAL NOTES / SYMBOLS / LEGEND / ABBREVIATIONS
B1.0	TYPICAL DETAILS
B2.0	LOWER FLOOR FRAMING AND FOUNDATION PLAN
B2.1	UPPER FLOOR FRAMING PLAN
B2.2	ROOF FRAMING PLAN
B3.0	CUSTOM DETAILS
B3.1	CUSTOM DETAILS
B3.2	CUSTOM DETAILS

APPROXIMATE PARCEL #	APN 415-101-017
ADDRESS...	3932 PARK AVE., BIRMINGHAM, GA.
OWNER'S NAME	TURNER BETHLEN & LIZ GABBY
EXISTING USE	SINGLE FAMILY RESIDENCE
ZONE DISTRICT	
COUPANRY GROUP	R-3L
TYPE OF CONSTRUCTION	V-B
SIZE OF LOT	5,492 sq. ft.
EXISTING BUILDING AREA MAIN LEVEL	392 sq. ft.
PROPOSED BUILDING AREA MAIN LEVEL ADDITION LOWER LEVEL ADDITION PROPOSED TOTAL	80 sq. ft. 484 sq. ft. <u>1,280 sq. ft.</u>
EXIST. IMPERVIOUS SURFACES ASPHALT DRIVEWAY CONC. STEPS & LANDINGS EXISTING TOTAL	495 sq. ft. 745 sq. ft. 700 sq. ft.
PROPOSED IMPERVIOUS SURFACES CONCRETE LANDINGS PROPOSED TOTAL	80 sq. ft. <u>780 sq. ft.</u>

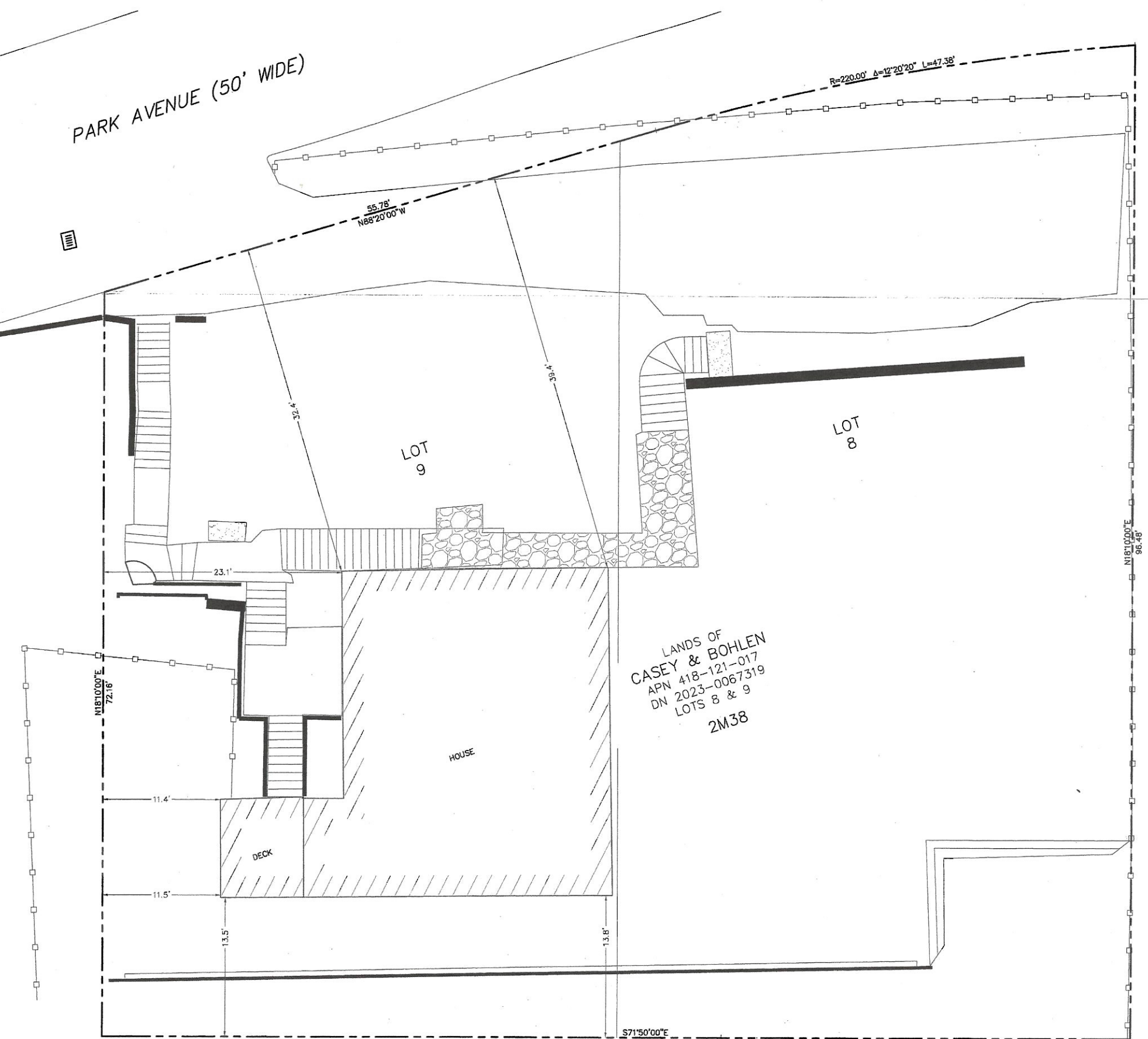
APPLICABLE CODES	
A. CALIFORNIA FIRE CODE	2002 EDITION
B. CALIFORNIA BUILDING CODE	2003 EDITION
C. CALIFORNIA MECHANICAL CODE	2001 EDITION
D. CALIFORNIA PLUMBING CODE	2002 EDITION
E. CALIFORNIA ELECTRIC CODE	2002 EDITION
F. CALIFORNIA ENERGY CODE	2001 EDITION
G. CALIFORNIA RESIDENTIAL CODE	2002 EDITION
H. CALIFORNIA GREEN BUILDING CODE	2002 EDITION
-I- ANY OTHER APPLICABLE LOCAL AND STATE LAWS AND REGULATIONS	




 SITE PLAN
 5' = 1"

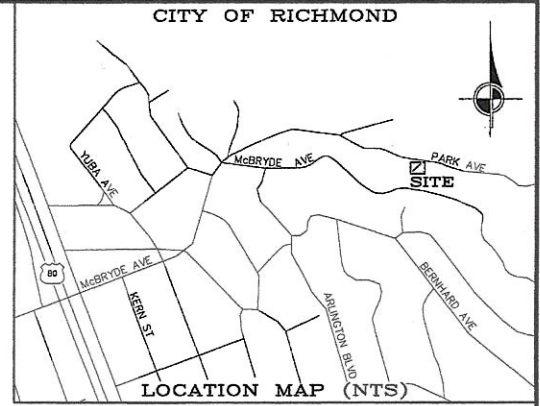
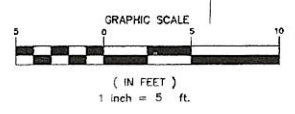


PARK AVENUE (50' WIDE)



TOPOGRAPHIC SURVEY OF
5932 PARK AVE, RICHMOND
FOR TURNER BOHLEN AND ELIZABETH CASEY

LANDS OF
CASEY & BOHLEN
APN 418-121-017
DN 2023-0067319
LOTS 8 & 9
2M38



LEGEND

---	SUBJECT PROPERTY BOUNDARY
-□-	WOOD FENCE
[Pattern]	PATHWAY
[Pattern]	CONCRETE

SURVEY NOTES
ALL DISTANCES ARE IN IS SURVEY FEET AND DECIMALS THEREOF.
ALL TIES ARE AT RIGHT ANGLES UNLESS OTHERWISE NOTED.

BASIS OF BEARINGS
THE SIDE PROPERTY LINE OF LOT 8, BLOCK 22 OF MAP 2M38 FILED IN CONTRA COSTA COUNTY.

SURVEYOR'S STATEMENT
THIS MAP REPRESENTS A FIELD SURVEY MADE BY ME OR UNDER MY DIRECTION ON DECEMBER 9, 2023 AND REPRESENTS THE VISUAL SURFACE CONDITIONS AS OF AFORESAID DATE.

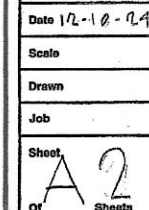
100 x 72.16 7.216
100 x 64.32/2 1.216
6.432 @ LOT

THOMAS S. FINNEGAN, PLS 8894 DATE

Job Name:	5932_PARK_AVE	DRAWN BY: BT	CHECKED BY: TF
Scale:	1" = 5'	SHEET: 1 OF 1	JOB NUMBER: 2024-001
Description:	TOPOGRAPHIC SURVEY	DWG. PATH: D:\TFS\5932 Park Ave Topo\	DWG. FILE: 5932 Park Ave Topo.dwg
		DATE/TIME: Jun 06, 2024 - 12:10pm	

Dotter & Solfield
Architecture + Design
4801 PARK BOULEVARD
OAKLAND, CALIFORNIA 94602
PHONE 510 530 9231 FAX 510 530 9223

BOHLEN-GAGLEY RESIDENCE
5960 PARK AVE., NICHOLAND, CA.



Scale: 1/4" = 1'-0"



Scale: 1/4" = 1'-0"

UpperFlr	<u>861 sq.ft.</u>	FINISHED
	861 sq.ft.	
LowerFlr	491 sq.ft.	OTHER
Deck	77 sq.ft.	
Front Stairs	<u>92 sq.ft.</u>	
	661 sq.ft.	
	<u>1,521 sq.ft.</u>	

CLG: FINISH CEILING ABOVE
J@: BOTTOM OF VISIBLE JOIST ABOVE

CLG 8'0"
FLR 99.52

VERTICAL HEIGHT FROM ELEVATION POINT

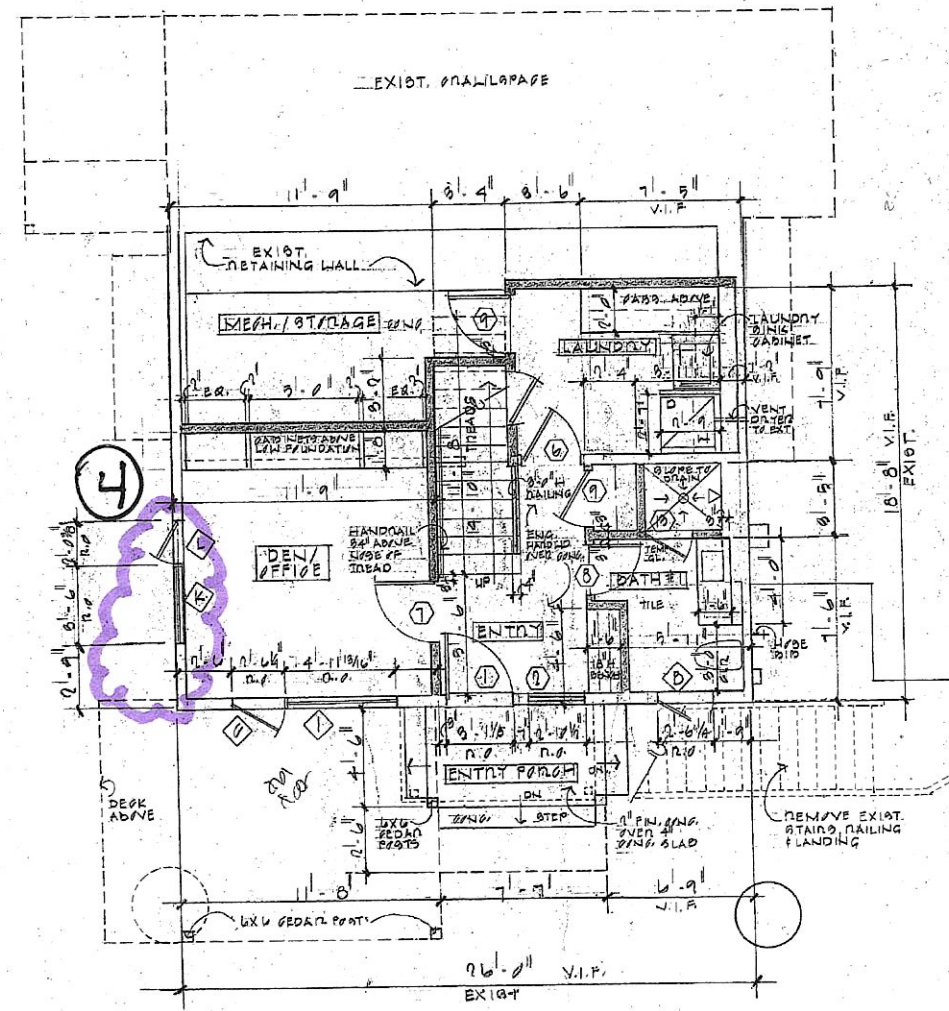
ELEVATION POINT FROM DATUM 100.00

FLR: FINISH FLOOR OR TOP OF SLAB

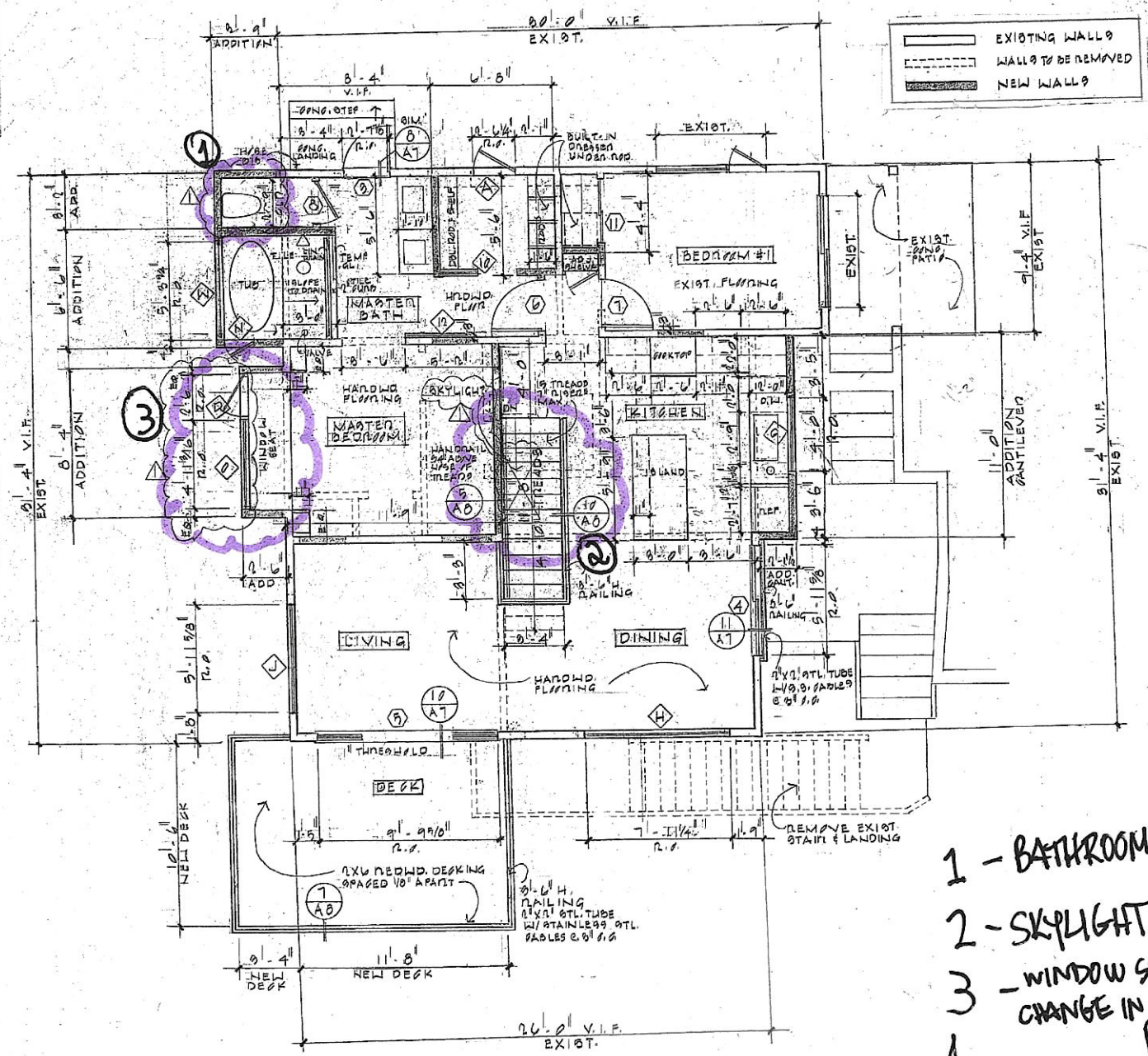
BOULEN-CADOT RESIDENCE
 5900 PARK AVE., RICHMOND, CA.



- * EGRESS WINDOWS: SLEEPING ROOM MUST HAVE A NET FLD. OPENING OF 5.7 SQ. FT. WITH A NET CLEAR HEIGHT OF 20" MIN. 14" HEIGHT AND THE SILL MUST BE WITHIN 44" OF THE FLOOR.
- * THERE MUST BE 15" MIN. BETWEEN THE CENTER OF PLUMBING FIXTURES SUCH AS WATER CLOSETS AND SINKS AND THE NEAREST WALL OR OBJECT.
- * ALL WATER CLOSETS SHALL BE LOW FLOW FLUSH TYPE 1.6 G.P.G.
- * SMOKE DETECTORS THROUGHOUT AS ALL APPLICABLE CODES - ALL SHOULD BE HANDWIRED TO 120V WITH A BATTERY BACKUP AND BE INTERCONNECTED.
- * ALL RAILINGS TO BE 42" H. ABOVE FIN. FLOOR.
- * ALL HANDRAILS TO BE 34" MIN. - 36" MAX. ABOVE DEAD RISING INTERIOR AND EXTERIOR.
- * FIRE BLOCKING IS REQUIRED TO PROVIDE A SEPARATION BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES; IN WALLS AT STAIR STRINGERS (TOP & BOTTOM); AT OFFITS; OVER CEILING; OVER CEILING; AND AT OPENINGS AROUND DUCTS, VENTS, PIPES AND FLUE CHIMNEYS. FIRE BLOCKING FIRE BLOCKING SHALL BE PROVIDED VERTICALLY AT THE CEILING AND FLOOR LEVELS AND HORIZONTALLY AT AT INTERVALS NOT EXCEEDING 10 FEET.
- * THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH SHALL NOT BE LESS THAN THE DOOR OPENED AND THE LENGTH OF LANDINGS SHALL BE MIN. 36" IN THE DIRECTION OF TRAVEL. EXTERIOR LANDINGS MAY BE PERMITTED TO SLOPE NOT TO EXCEED 1/4" UNITS HORIZONTAL (2%) OR 0.011."
- * DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS ON FLOORS NOT MORE THAN 1 3/4" BELOW THE TOP OF THE THRESHOLD. OR 0.011, 3/4" / 3/8"
- * EXTERIOR WINDOWS AND GLAZING IN DOORS: ALL GLAZING TO BE INSULATED GLASS WITH A MINIMUM OF ONE-TEMPERED PANE OF GLASS MEETING THE REQUIREMENTS OF CBC SECTION 2406. ALL NEW AND REPLACED WINDOWS TO HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 20 MINUTES.
- * EXTERIOR DOORS SHALL BE OF APPROVED NON-COMBUSTIBLE CONSTRUCTION: SOLID WOOD 1 3/8" TH. CONSTRUCTION OR SHALL HAVE FIRE RESISTANCE RATING OF NOT LESS THAN 20 MIN. WHEN TESTED PER NFPA 259.
- * KITCHEN HOOD SHALL HAVE A MIN. 100 CFM EXHAUST RATE AND HOOD TO HAVE BACKDRAFT DAMPER. IF HOOD IS PART OF INTERMITTENT WHOLE HOUSE FAN VENTILATION SYSTEM PER ASHRAE 62.2, MAX. SOUND RATING OF 5-5ONES IS ALLOWED AT 100 CFM (ASHRAE 62.2 & 1001.002).
- * EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL IN ACCORDANCE WITH THE 2019 CALIF. MECHANICAL CODE CHAPTER 4, AND THE 1990 ASHRAE 62.2 DIVISION 4.9. WINDOW VENTILATION IS NOT A PERMISSIBLE METHOD OF PROVIDING HUMIDITY CONTROL.
- * WALLS INSIDE OF ALL SHOWER AND TUB/SHOWER ENCLOSURES SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE TO A HEIGHT OF NO LESS THAN 6 FEET.
- * BATHROOM FANS SHALL HAVE A MIN. 50 CFM EXHAUST RATE AND FAN TO HAVE BACKDRAFT DAMPER. IF HOOD IS PART OF INTERMITTENT WHOLE HOUSE FAN VENTILATION SYSTEM PER ASHRAE 62.2, MAX. SOUND RATING OF 5-5ONES IS ALLOWED AT 100 CFM (ASHRAE 62.2 & 1001.002).
- * LAVATORY FAUCETS: 1.2 GALLONS/MINUTE.
- * KITCHEN FAUCETS: 1.0 GALLONS/MINUTE.



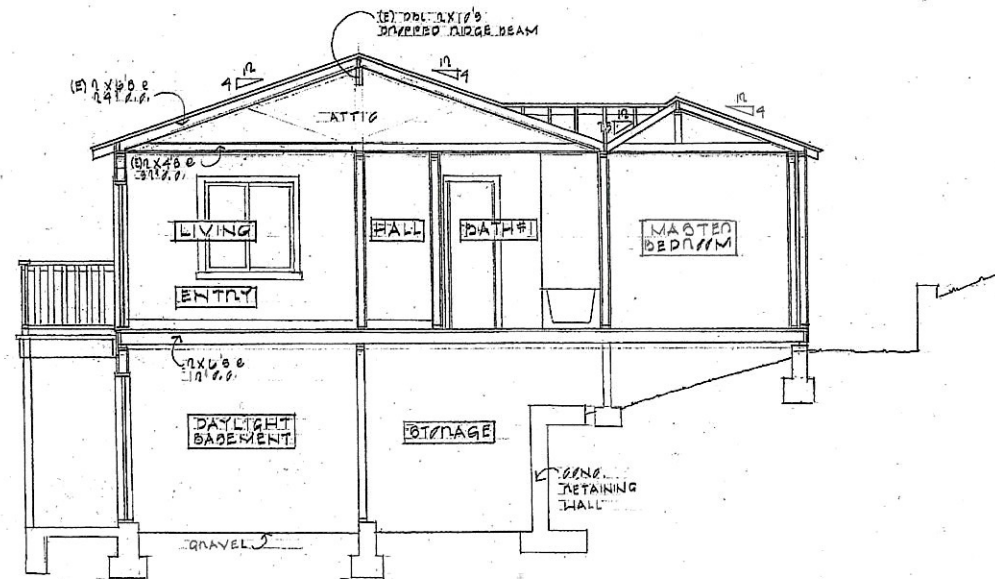
2 PROPOSED LOWER LEVEL FLOOR PLAN
 1/4" = 1'-0"



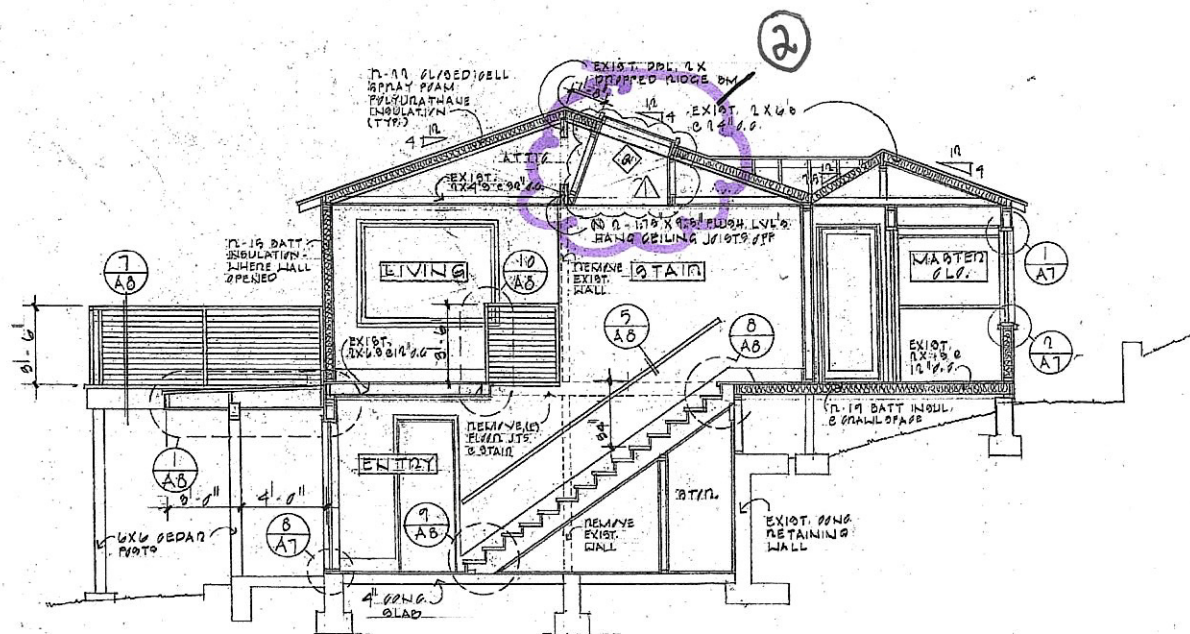
1 PROPOSED UPPER LEVEL FLOOR PLAN
 1/4" = 1'-0"

- 1 - BATHROOM
- 2 - SKYLIGHT
- 3 - WINDOW SEAT CHANGE IN STRUCT. PLAN
- 4 - NEW FOOTING PER STRUCTURAL

was cantilever new foundation



① EXISTING SECTION THRU ENTRY
1/4" = 1'-0"



② PROPOSED SECTION THRU ENTRY
1/4" = 1'-0"

Dotter & Selfield
Architecture + Design
4861 PARK BOULEVARD
OAKLAND, CALIFORNIA 94602
PHONE 510 530 9231 FAX 510 530 9233

Dotter & Selfield
Architecture + Design
4801 PARK BOULEVARD
OAKLAND, CALIFORNIA 94602
PHONE 510 530 9231 FAX 510 530 9223

BOHLEN-CADY RESIDENCE
5930 PARK AVE, MILFORD, CA.



Date 12-10-24

Scale

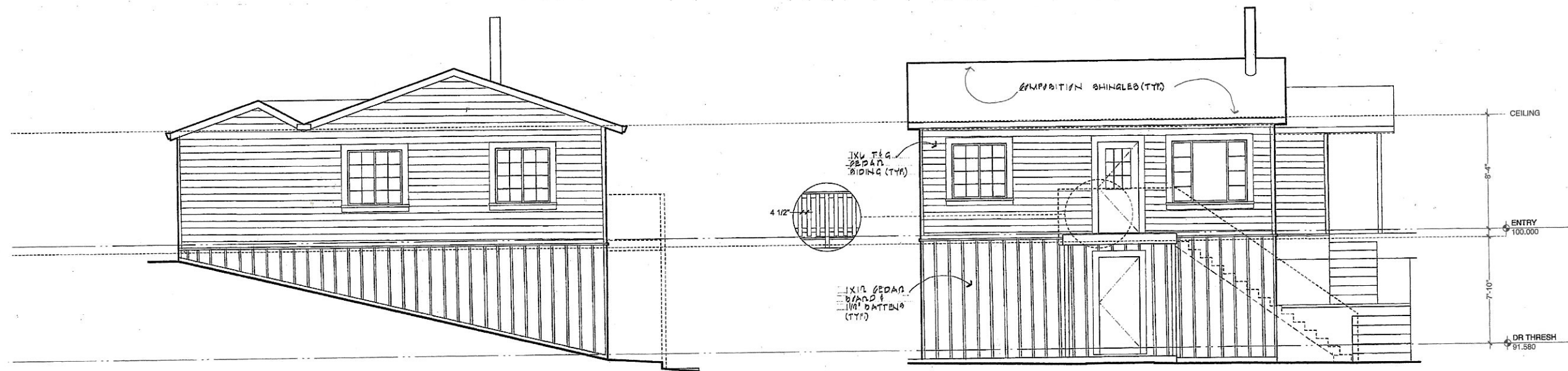
Drawn

	Job
--	-----

Sheet

11A

01/



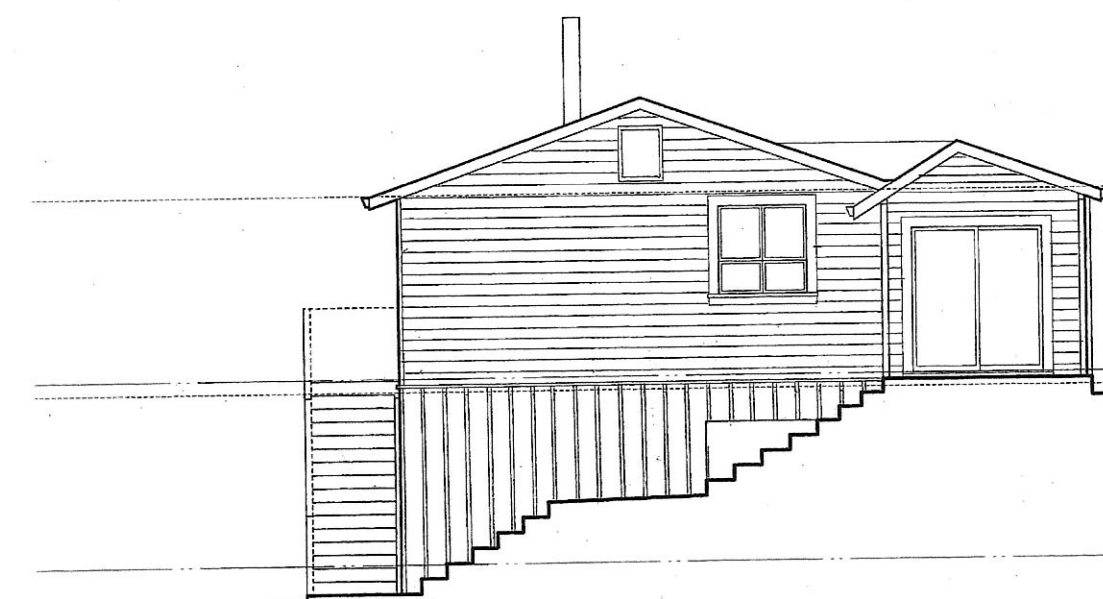
EXISTING EAST ELEVATION

Scale: 1/4" = 1'-0"



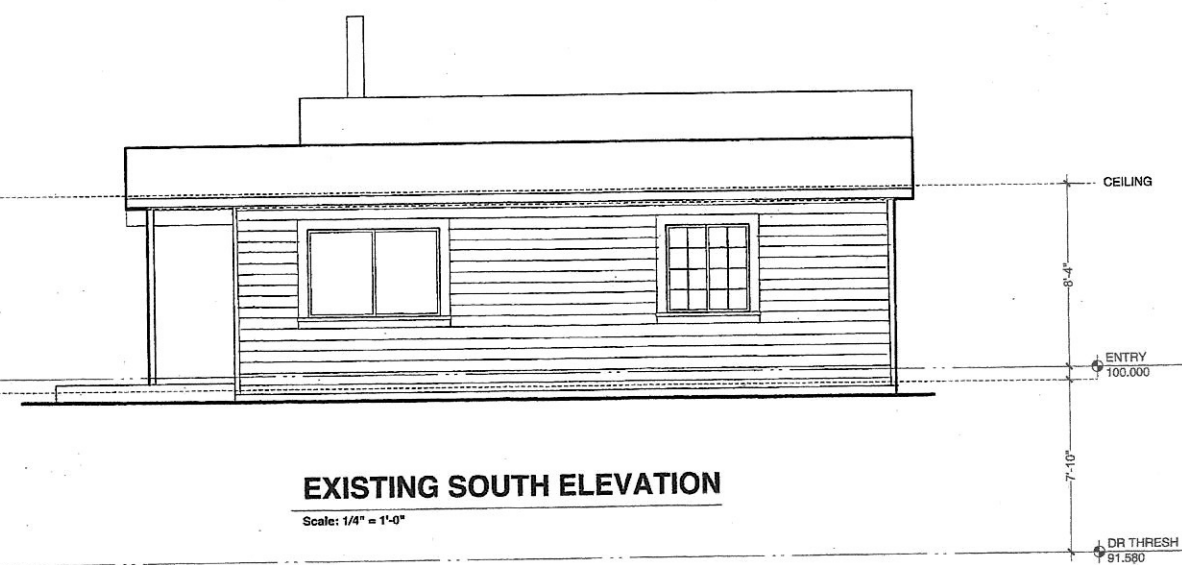
EXISTING NORTH ELEVATION

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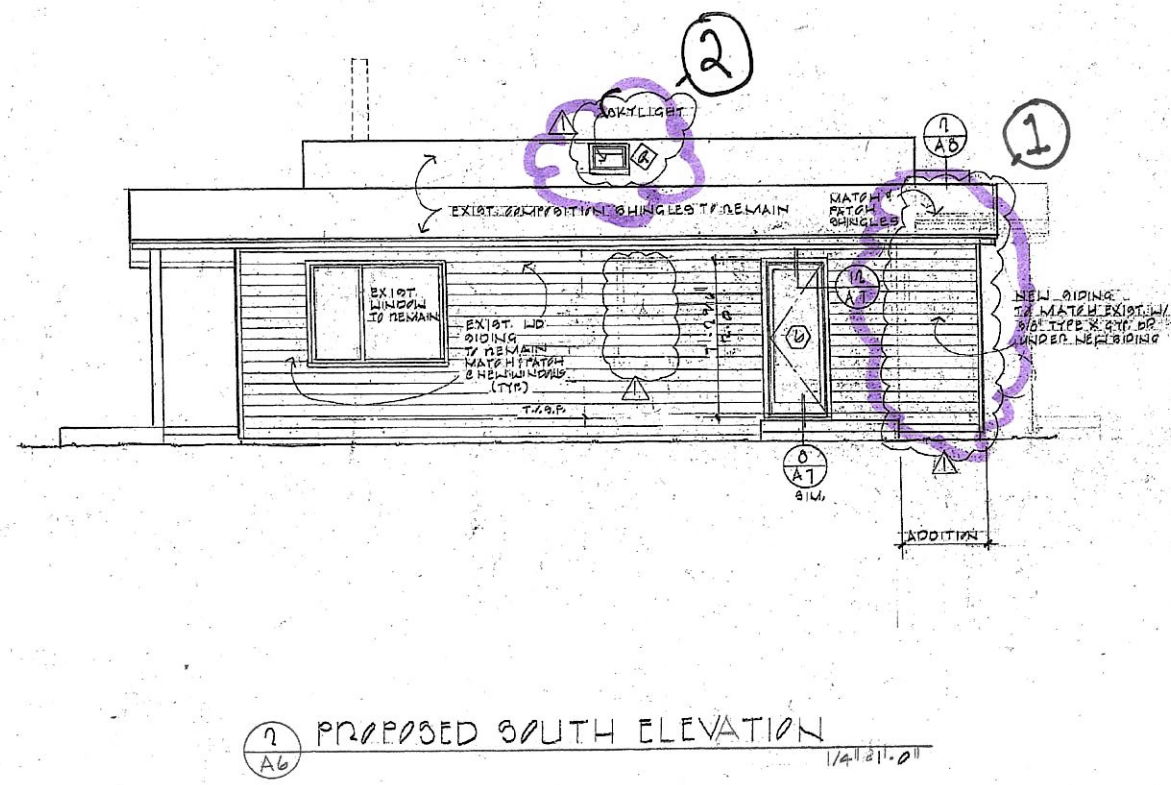
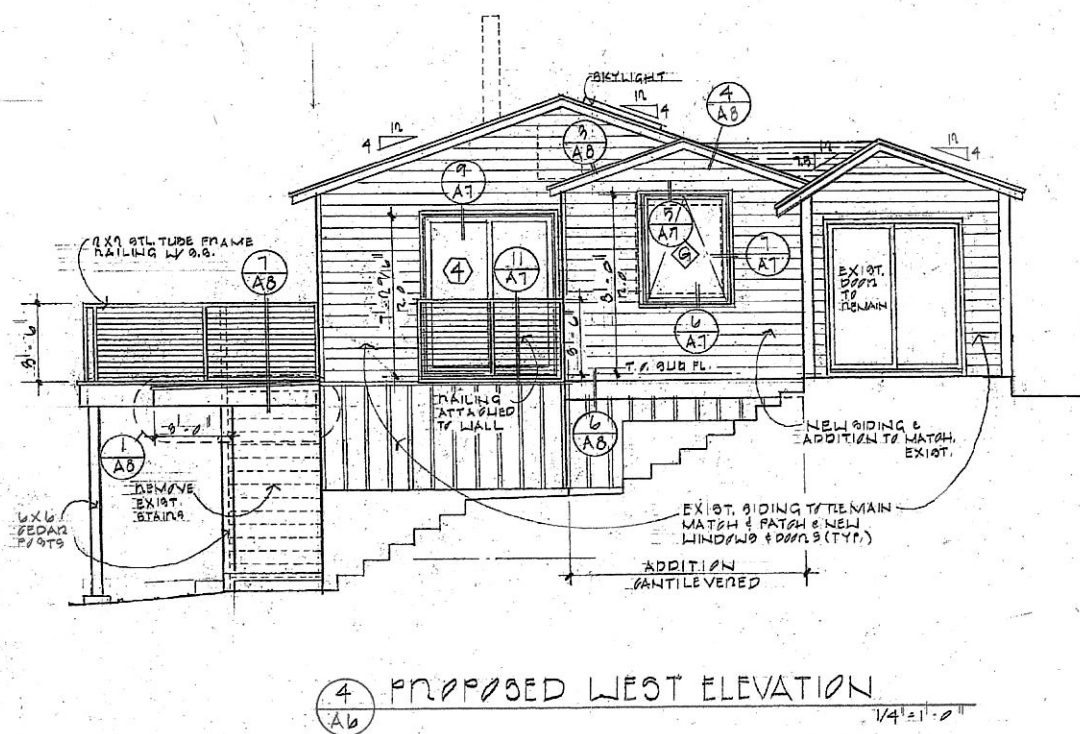
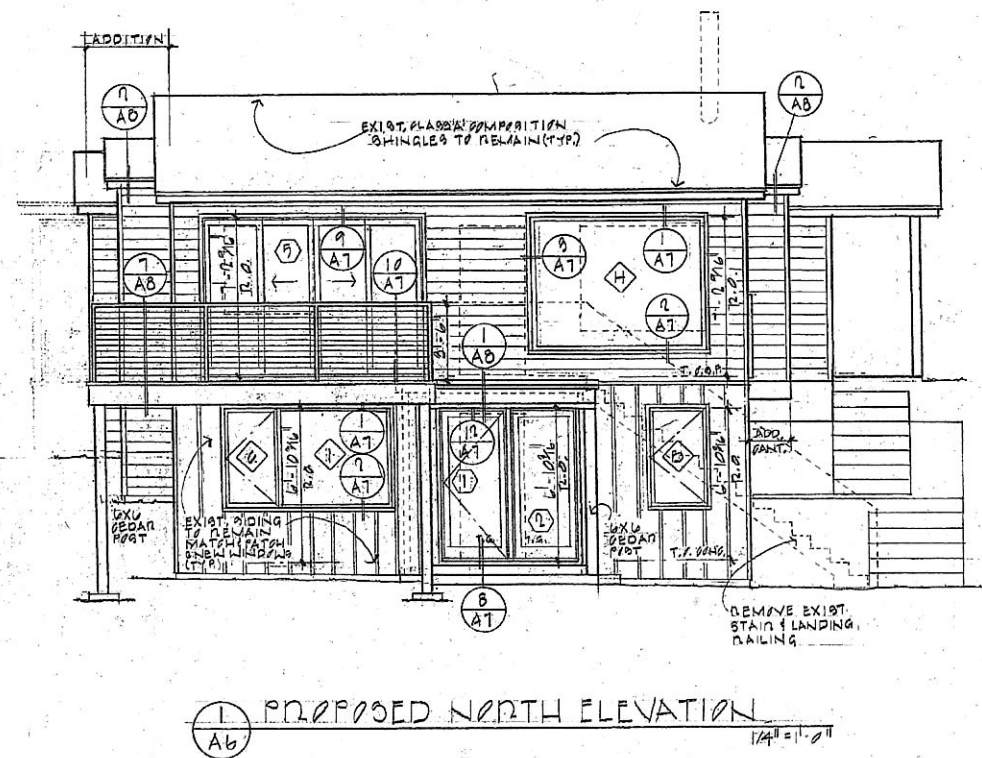
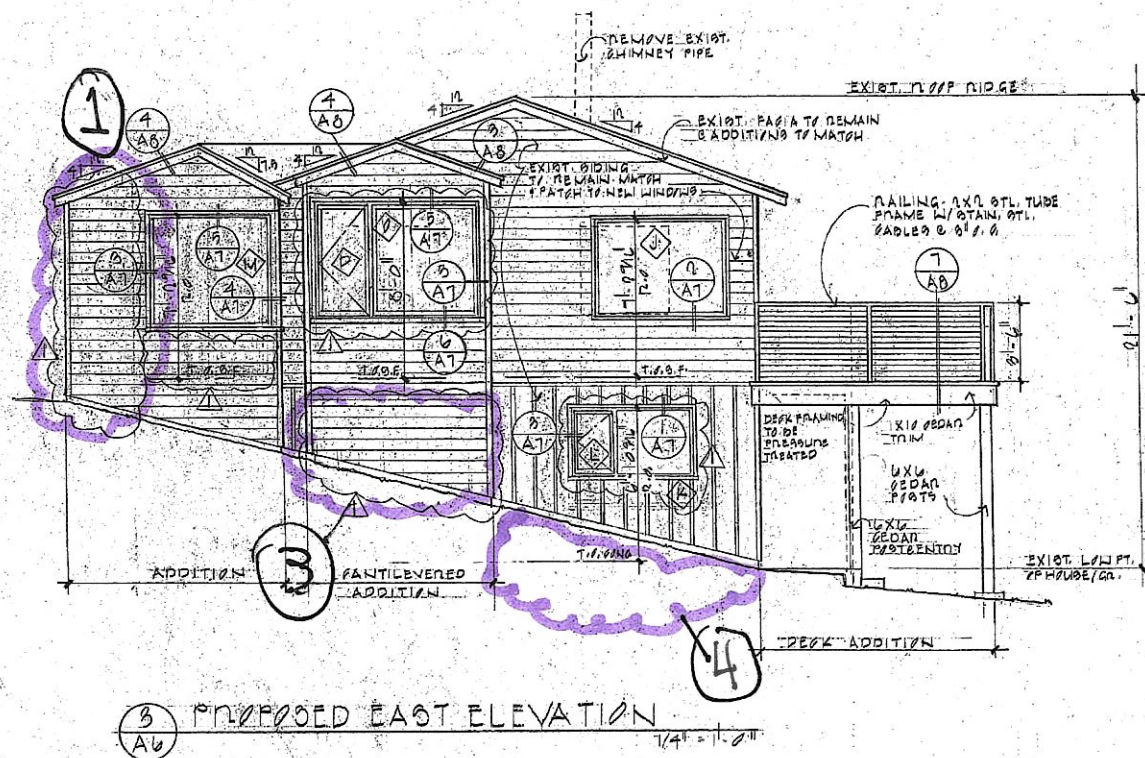
EXISTING WEST ELEVATION

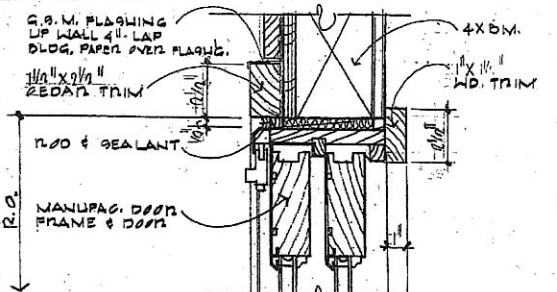
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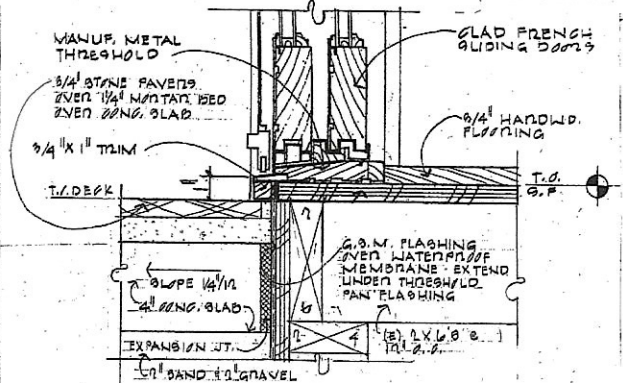
EXISTING SOUTH ELEVATION

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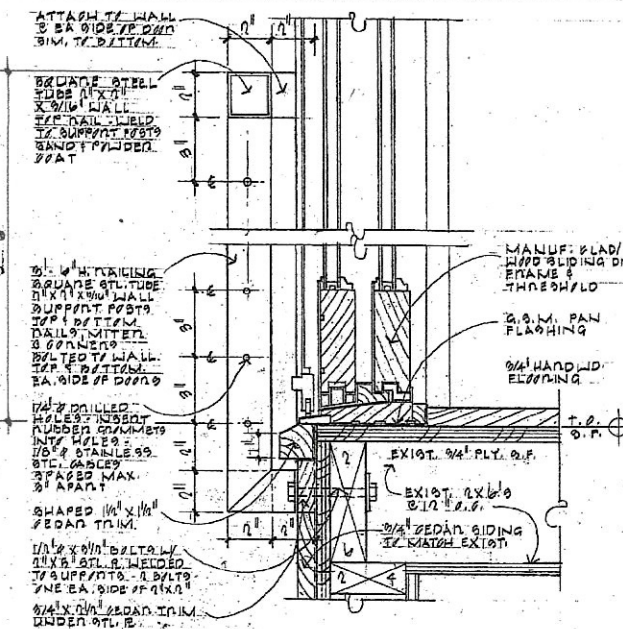




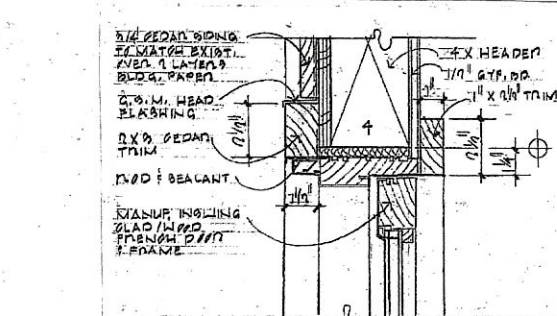
9 TYP. SLIDING DR. HEAD
 A7 JAMB SIM. 3/4\"/>



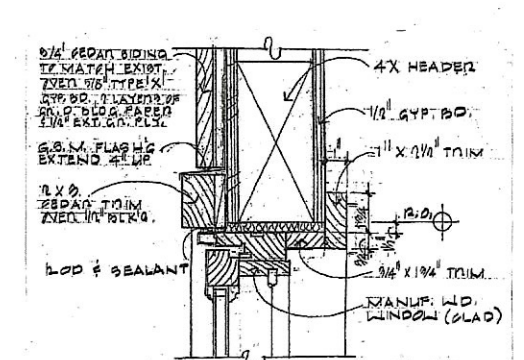
10 TYP. SLIDING DR. THRESHOLD
 A7 3/4\"/>



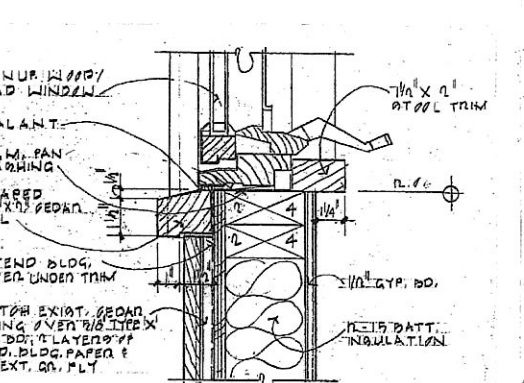
11 SLIDING DR. THRESHOLD
 A7 W/ RAILING 3/4\"/>



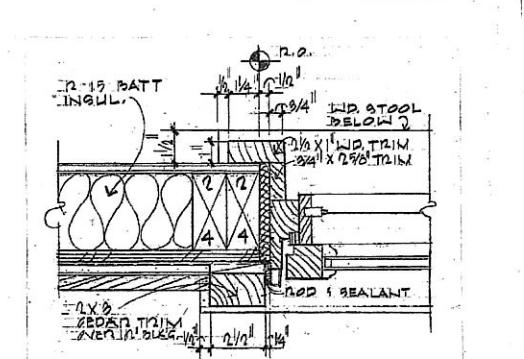
12 INSWING DR. HEAD
 A7 3/4\"/>



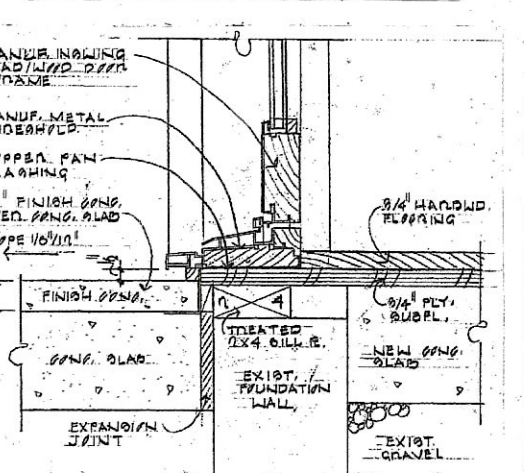
9 TYP. WINDOW HEAD
 A7 3/4\"/>



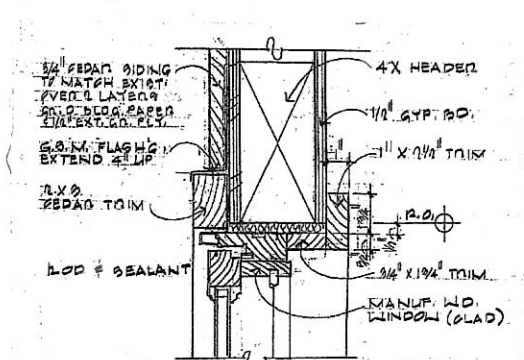
6 TYP. WINDOW SILL
 A7 3/4\"/>



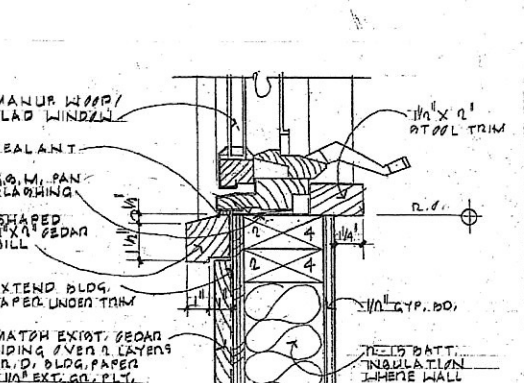
7 TYP. WINDOW JAMB
 A7 3/4\"/>



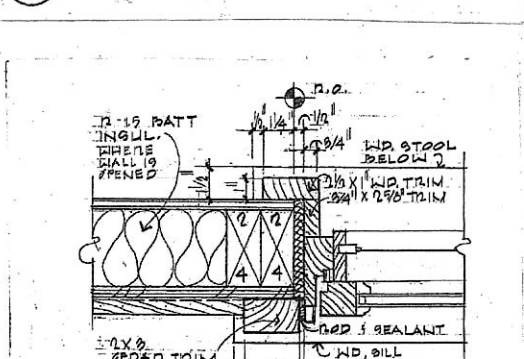
6 ENTRY DR. THRESHOLD
 A7 3/4\"/>



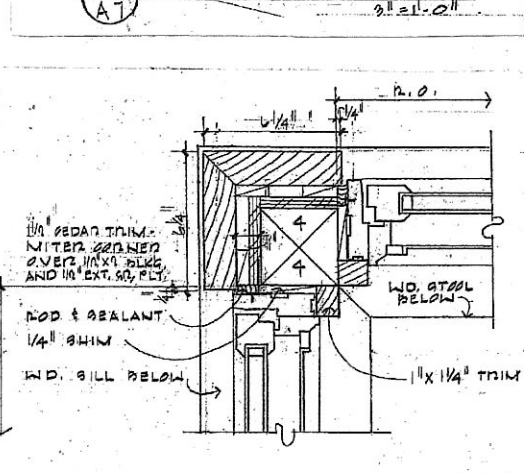
1 TYP. WINDOW HEAD
 A7 3/4\"/>



7 TYP. WINDOW SILL
 A7 3/4\"/>



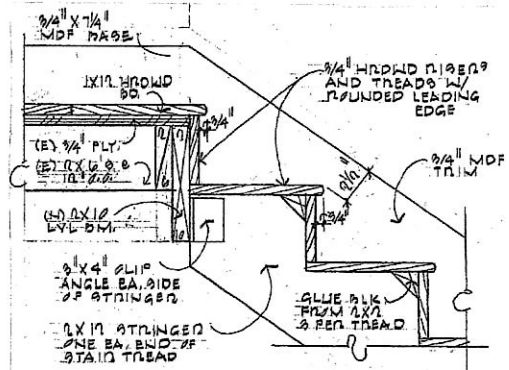
8 TYP. WINDOW JAMB
 A7 3/4\"/>



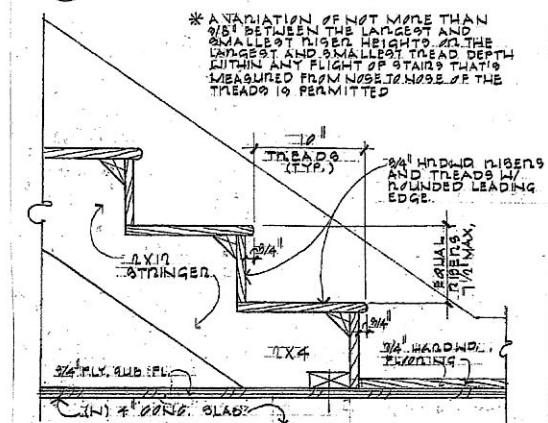
4 CORNER WINDOW JAMB
 A7 3/4\"/>

WINDOW SCHEDULE			DESIGNATION: L. SEWEN DOUBLE PANED GLASS TEMP. GL. FINE PANE TEMP. GL.		
TAG	LOCATION	DESIGNATION/NO.	DESCRIPTION	NO.	REMARKS
A	WALK-IN CLO.	2A1 78 14 21-6 1/2" X 9'-0 3/4"	GLAD SAGEMENT	1	TEMP. GL.
B	BATH #1	2A1 88 14 21-8 1/4" X 4'-8 3/4"		1	TEMP. GL.
C	DEN/OFFICE	2A1 78 14 21-6 1/4" X 4'-1 3/8"		1	MULL TO WINDOW K HORIZ. TEMP. GL.
D	MASTER BEDRM	2A1 78 14 21-8 1/4" X 3'-4 1/2"		1	MULL TO WINDOW O HORIZ. TEMP. GL.
E	MASTER BATH	2A1 78 14 21-8 1/4" X 3'-4 1/2"	GLAD SAGEMENT	1	MULL TO WINDOW L HORIZ. TEMP. GL.
F	MASTER BATH	2A1 78 14 21-8 1/4" X 3'-4 1/2"		1	MULL TO WINDOW N HORIZ. TEMP. GL.
G	KITCHEN	2A1 78 14 21-6 1/2" X 4'-0 3/4"		1	TEMP. GL.
H	DINING	2A1 78 17 21-1 1/4" X 6'-1 1/8"	GLAD FIXED SAGEMENT	1	SYSTEM 9122 TEMP. GL.
I	DEN/OFFICE	2A1 18 14 21-1 1/8" X 4'-7 1/2"		1	MULL TO WINDOW O HORIZ. TEMP. GL.
J	LIVING RM	2A1 18 14 21-1 1/8" X 4'-7 1/2"		1	TEMP. GL.
K	DEN/OFFICE	2A1 18 14 21-6 1/2" X 3'-0 3/8"		1	MULL TO WINDOW L HORIZ. TEMP. GL.
L	DEN/OFFICE	2A1 88 14 21-8 1/8" X 3'-0 3/8"	GLAD SAGEMENT	1	MULL TO WINDOW L HORIZ. TEMP. GL.
M	MASTER BATH	2A1 18 14 21-8 1/4" X 4'-7 1/2"	GLAD FIXED SAGEMENT	1	MULL TO WINDOW E BELOW TEMP. GL.
N	MASTER BATH	2A1 88 14 21-8 1/8" X 4'-7 1/2"		1	MULL TO WINDOW F BELOW TEMP. GL.
O	MASTER BEDRM	2A1 18 14 21-1 1/8" X 3'-0 3/8"		1	MULL TO WINDOW O HORIZ. TEMP. GL.
P	MASTER BATH	2A1 78 14 21-8 1/4" X 3'-4 1/2"	GLAD SAGEMENT	1	TEMP. GL.
Q	STAIRS	2A1 78 14 21-8 1/4" X 3'-4 1/2"	CREATABLE BLDG. SKYLIGHT	1	VELUX BLDG. SKYLIGHT 21-8 1/4" X 3'-4 1/2" OUTSIDE FRAME

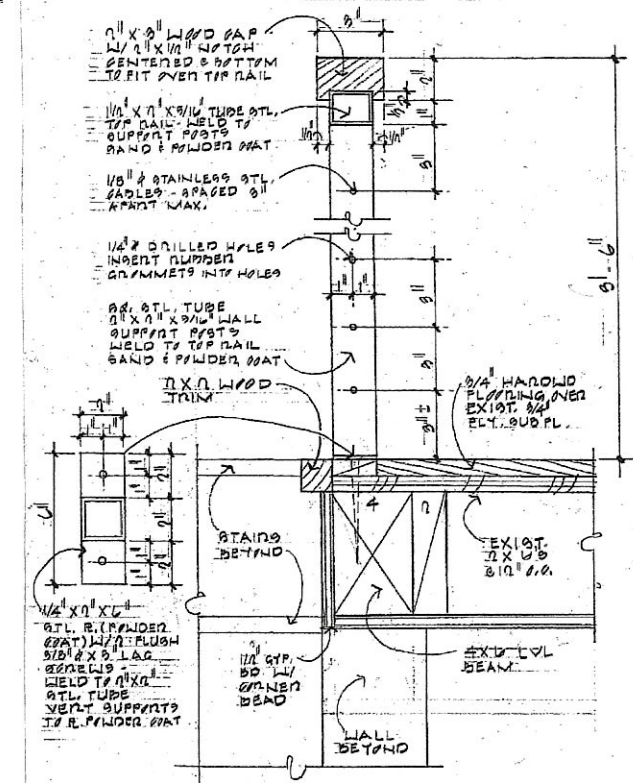
DOOR SCHEDULE				DESIGNATION: L. SEWEN		
				ALL DOOR PANE ONE PANE TEMP.		
TAG	LOCATION	TYPE	DESIGNATION/NO.	DESCRIPTION	NO.	REMARKS
1	ENTRY	A	TP1 89 11 21-10 1/2" X 71-10 3/16"	GLASS INSLUWING DOOR	1	NARROW STILE INSLUWING TERRACE DOOR TEMP. GL
2	ENTRY	A	TP1 89 11 21-10 1/2" X 71-10 3/16"	GLASS FIXED DOOR	1	FIXED NARROW STILE TERRACE DOOR TEMP. GL
3	MASTER BATH	A	TP1 89 11 21-10 1/2" X 71-10 3/16"	GLASS OUTSLUWING DOOR	1	NARROW STILE OUTSLUWING TERRACE DOOR TEMP. GL
4	DINING	B	TP2 13 17 21-11 1/2" X 71-2 3/16"	GLASS WIDE PATIOT SLIDING DOOR	1	NARROW STILE SLIDING PATIOT DOOR 2 PANEL TEMP. GL
5	LIVING	C	TP4 89 11 21-10 1/2" X 71-10 3/16"	GLASS WIDE PATIOT SLIDING DOOR	1	NARROW STILE SLIDING PATIOT DOOR 2 PANEL TEMP. GL
6	MASTER BATH	D	22 X 72	1/8" 8/16 DOOR FLUSH W/NO DR L	1	FLUSH 1/8" W/NO DR W/ V.G.D.F. VENEER
7	BEDRM #1 DEN/LAUNDRY	D	22 X 72		1	1
8	BATH #1	D	22 X 72		1	1
9	CLOSET HALL STORAGE	D	22 X 72		1	1
10	WALK-IN CLO.	D	22 X 72	POCKET DOOR 1/8" 8/16 DOOR FLUSH W/NO DR	1	POCKET DR. FLUSH 1/8" 8/16 W/NO DR VENEER HIGH QUALITY HARDWARE
11	BEDRM #1	E	22 X 72	DOOR SLIDING DOOR 1/8" 8/16 DOOR FLUSH W/NO DR	1	DOOR SLIDING DOOR FLUSH 1/8" 8/16 W/NO V.G.D.F. VENEER
12	MASTER BATH	F	22 X 72	1/8" 8/16 DOOR DOOR PANE 1 T.G. HARDWARE DOOR	1	1/8" 8/16 DOOR DR. 1/8" 8/16 DOOR PANE 1 T.G. DOOR HIGH QUALITY HARDWARE
13	BATH #1	G	22 X 72	TERRACE PANELED DOOR GLASS SHOWER DOOR	1	FLUSH PANELED DOOR W/ P/L, SHOWER HING AND HANDLE



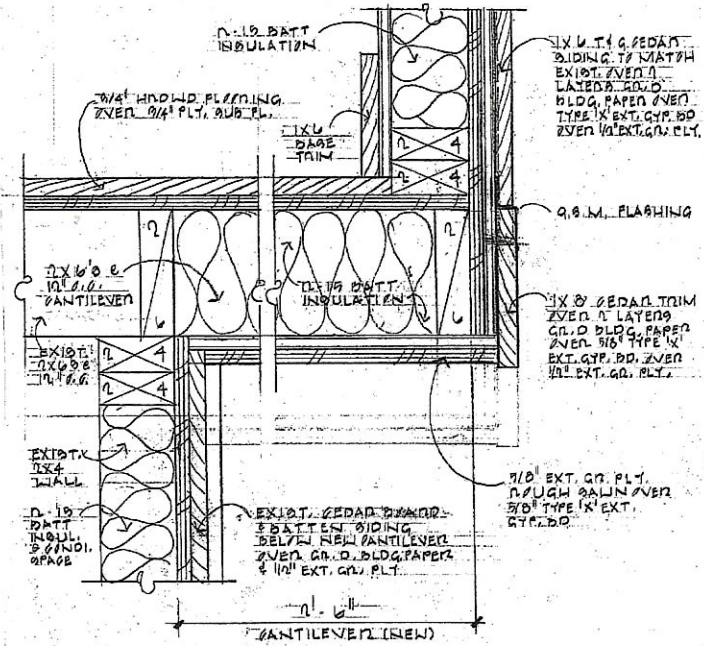
6 HEAD OF STAIR DETAIL



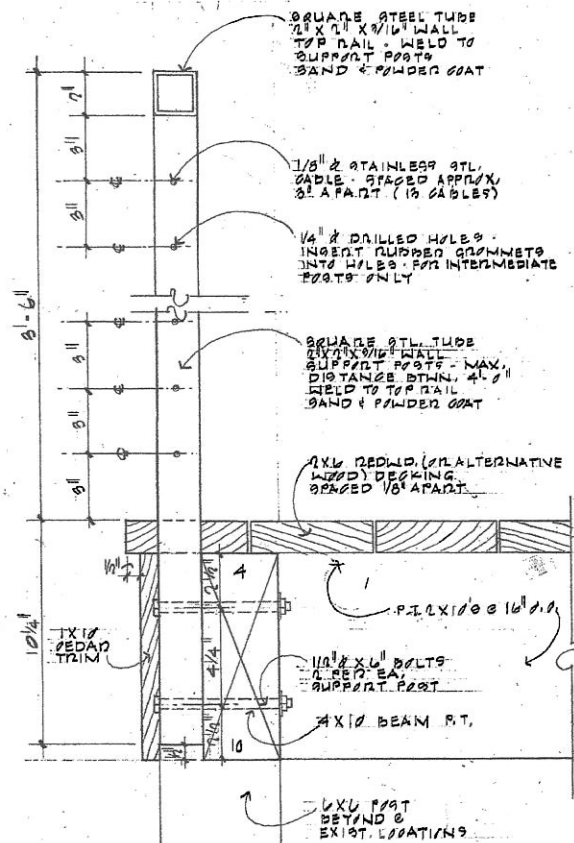
9 FOOT OF STAIR DETAIL



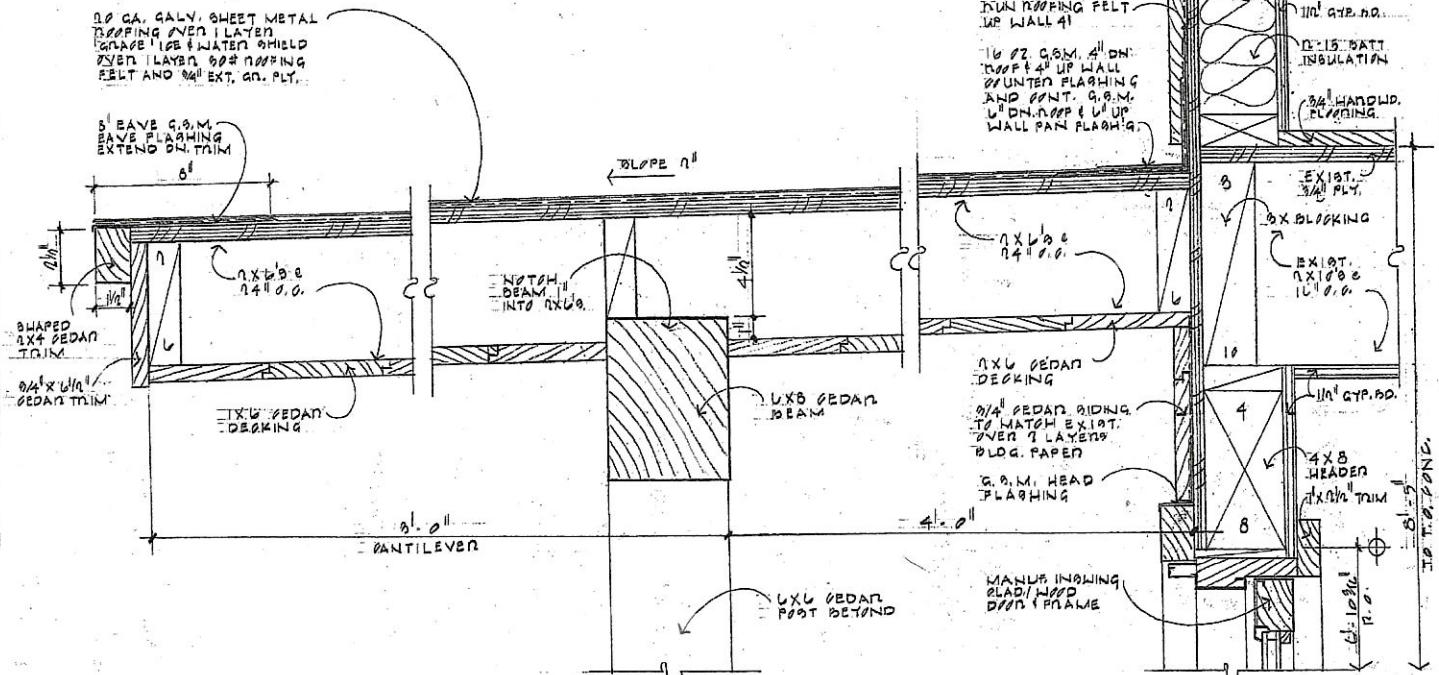
12 INTERIOR RAILING SECTION



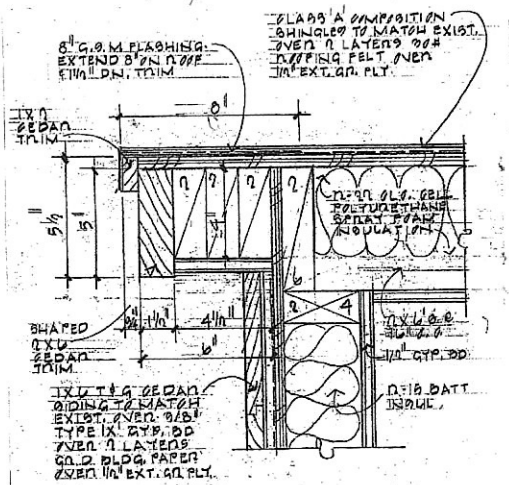
6 NEW CANTILEVERED BAY W.M. BEDRM.



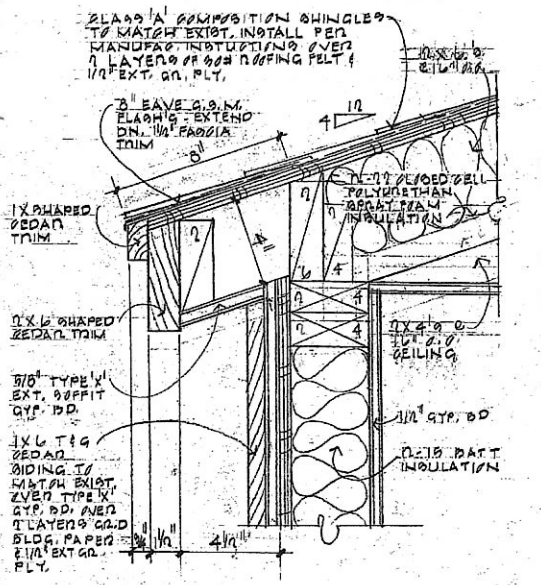
7 C.C. CABLE RAILING SECTION



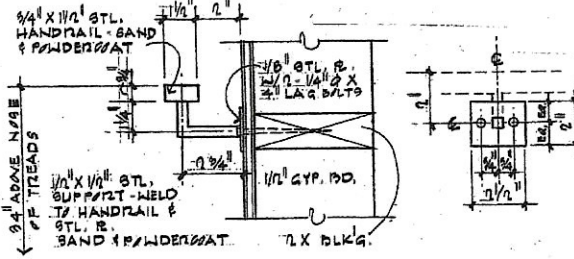
1 ENTRY PORCH ROOF SECTION



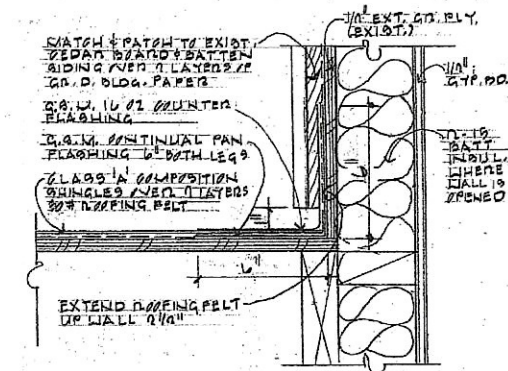
4 ROOF RAKE DET. & ADDITIONS



1 ROOF EAVE DET. & ADDITIONS

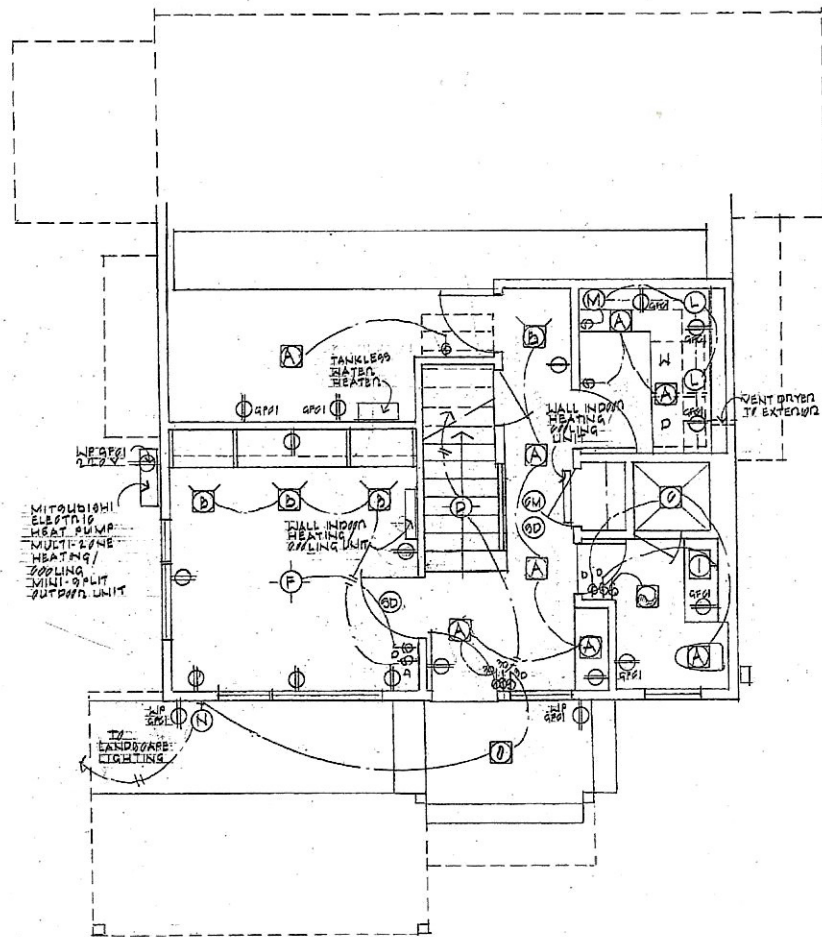


8 INTERIOR HANDRAIL DETAIL



3 ROOF RAKE & SIDEWALL

A LISTED RACEWAY TO BE PROVIDED TO ACCOMMODATE A DEDICATED 20/240-VOLT BRANCH CIRCUIT TO FACILITATE FUTURE INSTALLATION AND USE OF EV CHARGERS. THE SERVICE PANEL AND/OR SUBPANEL MUST PROVIDE CAPA TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIR AND BRACE (2) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE, (PAGE 4-100, 4-1)



2 LOWER LEVEL ELECTRICAL PLAN
1/4" = 1'-0"

NON-SMoke ALARM UNIT LOCATIONS REQUIRED FOR EACH (N) BEDROOM AND HALLWAY TO COMPLY WITH THE 2022 CBC SECTION 907.2.1.1.1.1 AND 907.2.1.1.1.2. SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE DWELLING.

ALL EXTERIOR OUTLETS SHALL BE WEATHER-PROOF TYPE AND GFCI PROTECTED.

WATER OUTLETS WITH HOSE ATTACHMENTS AND HOSE BIBS MUST HAVE APPROVED NON-REMOVABLE TYPE BACK FLOW PREVENTION DEVICES INSTALLED.

PROJECT TO BE IN COMPLIANCE WITH THE 2022 MANDATORY MECHANICAL VENTILATION PER STANDARDS SECTION.

BATHROOMS:

EACH BATHROOM TO HAVE A DEDICATED EXHAUST FAN DUCTED TO THE OUTSIDE.

THE BATHROOMS WILL BE EQUIPPED WITH INTERMITTENT OPERATED EXHAUST FAN. THE MIN. VENTILATION RATE REQUIRED IS 8 CFM.

THE EXHAUST FANS WILL BE OPERATED BY A WALL SWITCH THAT IS ACCESSIBLE AND OBVIOUS.

KITCHEN:

THE KITCHEN IS REQUIRED TO HAVE A DEDICATED EXHAUST FAN DUCTED TO THE OUTSIDE.

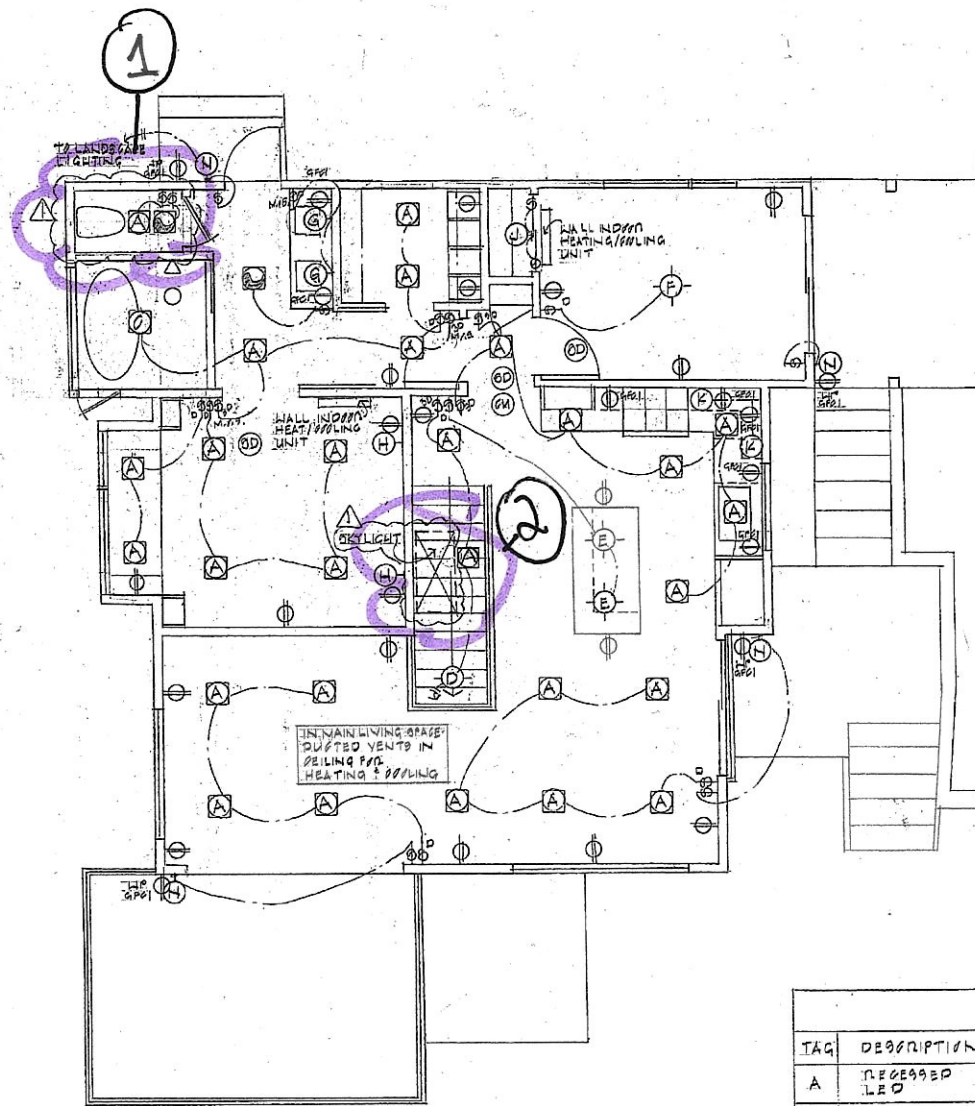
THE RANGE HOOD OVER THE STOVE MAY COMPLY WITH VENTED TO THE OUTSIDE AND HAS A MIN. VENTILATION RATE OF 100 CFM. (ACTUAL FAN TO BE USED 100 CFM)

SHOWERS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE THERMOSTATIC MIXING OR PRESSURE BALANCE TYPE, AND NOZZLE LOCATION TO BE COMPLIANCE WITH THE 2022 CBC.

ALL BATHROOMS TO HAVE MANUAL-ON OCCUPANCY SENSORS.

ALL INTERIOR DOORS (OTHER THAN KITCHEN, BATHROOMS AND LAUNDRY) WILL HAVE DIMMER SWITCHES, EXCEPT SLUGS LESS THAN 10 SQ. FT.

G.F.C.I. PROTECTED RECEPTILES TO BE PROVIDED THROUGHOUT THE KITCHEN AND ALL ISLANDS, AND ADJACENT TO EACH JACIN IN BATHROOMS.



1 UPPER LEVEL ELECTRICAL PLAN
1/4" = 1'-0"

RESIDENTIAL HVAC SYSTEMS BOTH EXISTING AND NEW AND PARTS THEREOF SHALL BE INSPECTED IN ACCORDANCE WITH ASHRAE 154. THE PLINER OF THE OWNER'S DESIGNATED AGENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF MECHANICAL SYSTEMS AND EQUIPMENT. TO DETERMINE COMPLIANCE WITH THIS SUBSECTION, THE A.H.J. SHALL BE PERMITTED TO CAUSE AN HVAC SYSTEM TO BE INSPECTED DURING 104.4.1.

FOR THE 2021 AND 2022 GAS LINE PRESSURE TESTING IS NOW 10 PSI FOR 15 MINUTES AND WELDED PIPING IS 60 PSI FOR 90 MINUTES.

FOR THE 2021 AND 2022 VENT TERMINALS THAT TERMINATE THROUGH AN OUTSIDE WALL OF A BUILDING SHALL BE LOCATED NOT LESS THAN 10 FEET HORIZONTALLY FROM AN OPERABLE OPENING IN AN ADJACENT BUILDING.

AUTOMATIC GAS SHUT OFF VALVES ARE REQUIRED.

ALL NEW RECEPTILES ARE REQUIRED TO BE RATED T.P. (FAMER RESISTANT) (SEE 406.11) PROVIDE MAIN AND SUBPANEL ELECTRICAL SERVICE SIZE AND LOCATION ON PLANS. (SEE 110-2.6)

ELECTRICAL SERVICE PANELS AND SUBPANELS NOT TO BE LOCATED IN BATHROOMS, CLOTHES, CLOSETS OR OTHER AREAS DESIGNATED FOR STORAGE. (SEE 110-2.6, 144-2.4)

- Ⓢ SMOKE DETECTOR
- Ⓚ TELEPHONE/LOCAL AREA NETWORK
- Ⓜ CABLE TELEVISION
- Ⓢ SWITCH
- Ⓢ DIMMER
- Ⓢ THREE-WAY SWITCH
- Ⓢ FOUR-WAY SWITCH/DIMMER
- Ⓢ OUTLET
- Ⓢ FLOOR OUTLET
- Ⓢ BUILT-IN SPEAKER
- Ⓢ SUPPLY DUCT REGISTER
- Ⓢ MANUAL-ON OCCUPANCY SENSORS
- Ⓢ CARBON MONOXIDE DETECTOR
- Ⓢ GFCI PROTECTED OUTLET
- Ⓢ WATER-PROOF GFCI PROTECTED OUTLET

TAG	DESCRIPTION	MFR/MODEL #	LAMP	REMARKS
A	RECESSED LED	HALO LIGHTING A457116ATIE-H3 LED	14W	2" LED GEN 2 HUBBING INSULATED AIR TIE REMODEL HUBBING 120V/100W, DIMMABLE
B	RECESSED LED ADJUSTABLE	HALO LIGHTING EL64069/EL64069-A4	14W	2" LED GEN 2 HUBBING ADJUSTABLE DIMMABLE LIGHT ENGINE WHITE TRIM/DIMMABLE
C	RECESSED LED ADJUSTABLE	HALO LIGHTING EL64069/EL64069-A4	14W	2" LED GEN 2 HUBBING ADJUSTABLE DIMMABLE LIGHT ENGINE WHITE TRIM/DIMMABLE
D	CEILING MOUNTED SURFACE PENDANT	TO BE PROVIDED BY OWNER INSTALLED BY CONTRACTOR		CEILING PENDANT W/DIMMER IN ENTRY
E	CEILING MOUNTED SURFACE PENDANT	II		CEILING PENDANT W/DIMMER IN KITCHEN
F	CEILING MOUNTED SURFACE PENDANT	II		CEILING PENDANT W/DIMMER IN BEDRM #1, DEN/OFFICE
G	WALL MOUNTED SURFACE PENDANT	II		WALL PENDANT W/DIMMER ABOVE SINKS IN BATH
H	WALL MOUNTED SURFACE PENDANT	II		WALL PENDANT W/ADJ. MOUNTED EA SIDE OF BED
I	WALL MOUNTED SURFACE PENDANT	II		WALL PENDANT W/DIMMER ABOVE MIRROR IN BATH #1
J	WALL MOUNTED SURFACE PENDANT	II		WALL PENDANT W/ADJ. MOUNTED EA SIDE OF BED
K	UNDER CABINET LED	WAG LIGHTING - LWN PROFILE / LED 8 3/4"	16 W	MOUNTED UNDER UPPER CABINETS / DIMMABLE
L	UNDER CABINET LED	WAG LIGHTING - LWN PROFILE / LED 4 3/4"	14.5 W	II
M	UNDER CABINET LED	WAG LIGHTING - LWN PROFILE / LED 4 3/4"	14.5 W	II
N	WALL MOUNTED EXT. SURFACE PENDANT	HINKLEY LIGHTING ATLANTIS 1646	8 W	EXTERIOR ALUMINUM W/ GLASS SHADE, DIMMABLE LIGHT
O	EXTENSION RECESSED LED ADJUSTABLE	JUNO LIGHTING - JBRK4 ADJ. 2 1/4" 90°/180°/270°	11.6 W	EXTERIOR 2 1/4" LED BOPPLE RECESSED TUN. - 2 1/4" 90°/180°/270° ADJUSTABLE WHITE
P	RECESSED CEILING EXHAUST FAN	FAHRSCHNIG WHISPER SERIES		SELECT MODEL APPROPRIATE FOR SIZE/CONDITIONS OF BATH

REVISIONS	BY
1	10-16-24

Dotter & Selfield
Architecture + Design
4801 PARK BOULEVARD
OAKLAND, CALIFORNIA 94602
PHONE 510 530 9231 FAX 510 530 9233

BOULEVARD CASEY RESIDENCE
5981 PARK AVE., RICHMOND, CA.



Date 10-16-24
Scale
Drawn
Job
Sheet 1 of 1

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapsh
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2024-02-20T18:56:07-05:00
Input File Name: 2024-02-ea-4 vcapHP wR22 roofs.rld22x

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GENERAL INFORMATION									
01	Project Name	Bohlen-Casey E+A/A vcapsh							
02	Run Title	Title 24 Analysis							
03	Project Location	2932 Park Avenue							
04	City	Richmond							
05	Zip code	94805							
06	Climate Zone	3							
07	Building Type	Single family							
08	Project Scope	Addition and/or Alteration							
09	Existing Cond. Floor Area (ft²)	486.8							
10	Existing Total Cond. Floor Area (ft²)	852							
11	ADU Bedroom Count	n/a							
12	Fuel Type	Natural gas							
13	Standards Version	2022							
14	Software Version	EnergyPro 9.2							
15	Front Orientation (deg/ Cardinal)	18							
16	Number of Dwelling Units	1							
17	Number of Bedrooms	3							
18	Number of Stories	2							
19	Fenestration Average U-factor	0.38							
20	Glazing Percentage (%)	37.46%							
21	ADU Conditioned Floor Area	n/a							
22	No Dwelling Unit	No							

COMPLIANCE RESULTS									
01	Building Complies with Computer Performance								
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.								
03	This building incorporates one or more Special Features shown below								

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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ENERGY USE SUMMARY									
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft²-yr)	Standard Design TDV Energy (EDR2) (kBtu/ft²-yr)	Proposed Design Source Energy (EDR1) (kBtu/ft²-yr)	Proposed Design TDV Energy (EDR2) (kBtu/ft²-yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)			
Space Heating	0	13.69	0	16.8	0	-3.11			
Space Cooling	0	11.7	0	10.59	0	1.11			
IAQ Ventilation	0	0	0	0	0	0			
Water Heating	0	30.3	0	27.11	0	3.19			
Self Utilization/Flexibility Credit									
Efficiency Compliance Total	0	55.69	0	54.5	0	1.19			
Photovoltaics		0		0					
Battery		0		0					
Flexibility									
Indoor Lighting	0	8.06	0	8.06					
Appl. & Cooking	0	27.59	0	27.54					
Plug Loads	0	43.23	0	43.23					
Outdoor Lighting	0	1.85	0	1.85					
TOTAL COMPLIANCE	0	136.42	0	135.18					

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ENERGY USE INTENSITY				
	Standard Design (kBtu/ft²-yr)	Proposed Design (kBtu/ft²-yr)	Compliance Margin (kBtu/ft²-yr)	Margin Percentage
Gross EU ¹	21.67	21.26	0.41	1.89
Net EU ²	21.67	21.26	0.41	1.89

Notes
1. Gross EU is Energy Use Total (not including PV) / Total Building Area.
2. Net EU is Energy Use Total (including PV) / Total Building Area.

UNMET LOAD HOURS (UNLH)				
Zone Name	Cooling Unmet Load Hour Limit for Zone	Proposed Cooling Unmet Load Hours	Heating Unmet Load Hour Limit for Zone	Proposed Heating Unmet Load Hours
Additions Upper	150.1	158.9	150.1	0

REQUIRED SPECIAL FEATURES									
The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.									
• Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)									
• Compact distribution system basic credit									

HERS FEATURE SUMMARY									
The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry									
• Kitchen range hood									
• Verified EER/EER2									
• Verified Refrigerant Charge									
• Airflow in habitable rooms (SC3.1.4.1.7)									
• Verified heat pump rated heating capacity									
• Wall-mounted thermostat in zones greater than 150 ft² (SC3.4.5)									
• Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)									

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

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BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Bohlen-Casey E+A/A vcapsh	1338.8	1	3		0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
Existing Home	Conditioned	New MultiSHIP1	852	9	DHW Sys 1	Existing Unchanged
Additions Upper	Conditioned	New MultiSHIP1	67.2	9	DHW Sys 1	New
Addit.Lower	Conditioned	New MultiSHIP1	419.6	8	DHW Sys 1	New

OPAQUE SURFACES										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Area (ft²)	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front.Upper	Existing Home	Vint Wall R11 NoVerif2022	18	Front	216.7	118.47	90	none	Existing	No
Left.Upper	Existing Home	Vint Wall R11 NoVerif2022	108	Left	180.4	28.17	90	none	Existing	No
Left.Gable	Existing Home	+R-15 Wall @Gable Ends	108	Left	70.5	0	90	none	Altered	No
Back.Upper	Existing Home	Vint Wall R11 NoVerif2022	198	Back	250	58.13	90	none	Existing	No
Right.Upper 1	Existing Home	Vint Wall R11 NoVerif2022	288	Right	83	40	90	none	Existing	No
Front.Upper 2	Existing Home	Vint Wall R11 NoVerif2022	18	Front	16.7	0	90	none	Existing	No
Right.Upper 2	Existing Home	Vint Wall R11 NoVerif2022	288	Right	119.2	43.09	90	none	Existing	No

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OPAQUE SURFACES										
01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Area (ft²)	Orientation	Gross Area (ft²)	Window and Door Area (ft²)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Right.Gable	Existing Home	+R-15 Wall @Gable Ends	288	Right	63.9	0	90	none	Altered	No
Add-1.Front	Additions Upper	R-15 Wall @Addits	18	Front	23.9	0	90	none	New	n/a
Add-1.Left	Additions Upper	R-15 Wall @Addits	108	Left	85.8	29.73	90	none	New	n/a
Add-1.Back	Additions Upper	R-15 Wall @Addits	18	Back	23.9	0	90	none	New	n/a
Add-2.Front	Additions Upper	R-15 Wall @Addits	18	Front	33.8	0	90	none	New	n/a
Add-2.Left	Additions Upper	R-15 Wall @Addits	108	Left	65.4	36.03	90	none	New	n/a
Add-2.Back	Additions Upper	R-15 Wall @Addits	198	Back	36.1	11.42	90	none	New	n/a
Add-3.Right	Additions Upper	R-15 Wall @Addits	288	Right	99	18.88	90	none	New	n/a
Add-3.Front	Additions Upper	R-15 Wall @Addits	18	Front	18	0	90	none	New	n/a
Front.Lower	Addit.Lower	R-15 Wall @Addits	18	Front	218.9	91.38	90	Extension	New	n/a
Left.Lower	Addit.Lower	R-15 Wall @Addits	288	Left	90.8	26.2	90	Extension	New	n/a
Right.Lower	Addit.Lower	R-15 Wall @Addits	288	Right	98.7	0	90	Extension	New	n/a
Right-Exposed Conc	Addit.Lower	8 Concrete Wall	288	Right	25.5	0	90	none	New	n/a
Add-1.Fir o/O	Additions Upper	R-19 Floor o/OpenSpace	n/a	n/a	20.8	n/a	n/a	n/a	New	n/a
Add-2.Fir o/O	Additions Upper	R-19 Floor o/OpenSpace	n/a	n/a	24.4	n/a	n/a	n/a	New	n/a
Add-3.Fir o/O	Additions Upper	R-19 Floor o/OpenSpace	n/a	n/a	22	n/a	n/a	n/a	New	n/a
Existing Upper Level	Existing Home	Vint Floor R12 NoVerif2022	n/a	n/a	432.4	n/a	n/a	n/a	Existing	No
RetWall-Left	Addit.Lower	8 Conc RetWall	n/a	n/a	23.2	n/a	n/a	n/a	New	n/a
RetWall-Right	Addit.Lower	8 Conc RetWall	n/a	n/a	36.1	n/a	n/a	n/a	New	n/a
IntSurf	Existing Home	IntSurf R-0 Floor Ceiling	n/a	n/a	419.6	n/a	n/a	n/a	New	n/a

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OPAQUE SURFACE CONSTRUCTIONS													
01	02	03	04	05	06	07	08	09	10	11	12	13	14

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapb
Calculation Description: Title 24 Analysis

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Input File Name: 2024-02-ea-4 vcapbP wR22 roofs.rbd22x

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OPAQUE SURFACE CONSTRUCTIONS											
01	02	03	04	05	06	07	08				
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers				
R-19 Floor o/Openpace	Exterior Floors	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.052	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6				
IntSurf R-0 Floor Ceiling	Interior Floors	Wood Framed Floor	2x8 @ 16 in. O. C.	R-0	None / None	0.198	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x8 Ceiling below Finish: Gypsum Board				
8 Conc RetWall	Underground Walls	Concrete / ICF / Brick	None	n/a	None / None	0.882	Inside Finish: Gypsum Board Mass Layer: 8 in. Concrete				

BUILDING ENVELOPE - HERS VERIFICATION											
01	02	03	04	05							
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50							
Not Required	Not Required	N/A	n/a	n/a							

WATER HEATING SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	Basic	n/a	DHW Heater 1 (1)	Altered	No	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapb
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2024-02-20T18:56:07-05:00
Input File Name: 2024-02-ea-4 vcapbP wR22 roofs.rbd22x

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WATER HEATERS														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Heating Efficiency Type	Rated Input Type	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	Tank Location	Status	Verified Existing Condition	
DHW Heater 1	Gas	Consumer Instantaneous	1	0	UEF	0.93	Btu/Hr	200000	0	n/a	n/a	Altered	No	

WATER HEATING - COMPACT DISTRIBUTION														
01	02	03	04	05	06	07								
Dwelling Unit type	Water Heating System Name	Master Bath distance of furthest fixture to Water Heater (ft)	Kitchen distance of furthest fixture to Water Heater (ft)	Farthest Third furthest fixture to Water Heater (ft)	Compactness Factor	HERS Verification								
Dwelling	DHW Sys 1	n/a	n/a	n/a	0.7	n/a								

WATER HEATING - HERS VERIFICATION														
01	02	03	04	05	06	07								
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery								
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	Basic	Not Required	Not Required								

SPACE CONDITIONING SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Existing HVAC System
New MultiSHP1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback	New	No	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapb
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2024-02-20T18:56:07-05:00
Input File Name: 2024-02-ea-4 vcapbP wR22 roofs.rbd22x

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HVAC - HEAT PUMPS												
01	02	03	04	05	06	07	08	09	10	11	12	13
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	BER/BER2	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	VCHP-ductless	1	HSPF2	7.5	45000	35000	EER2SEER2	14.3	12.2	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION												
01	02	03	04	05	06	07	08	09				
Name	Verified Airflow	Airflow Target	Verified EER/SEER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17				
Heat Pump System 1-hers-htpump	Not Required	0	Required	Not Required	Yes	No	Yes	Yes				

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION									
01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing: Gamp; Pressure Drop Rating	Low Leakage: Ducts in RA3.3 and SC3.3.4.1	Minimum Airflow per RA3.3 and SC3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

HERS RATER VERIFICATION OF EXISTING CONDITIONS									

PROJECT NOTES									

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapb
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2024-02-20T18:56:07-05:00
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Previous work: Existing one-story house built about 1990's, 2nd flr Addition @ 1990's
1. Heat Load Data provided per T24, Part 6, Sec.150(h); HVAC contractor solely responsible for HVAC sizing, selection, and installation.
2. New or replacement Kitchen Range Hood: require HERS verification of: 1) airflow (100cfm minimum), and 2) sound rating (3 sones or less per Section 7.2 of ASHRAE 62.2).
3. For calculation purposes, the side of the house facing the street is the "front". Entry is SGD on right side of house.
4. The efficiency of all existing building components, absent HERS Verification of Existing Conditions, is as required by Table 8-1 of the 2022 SF Residential Compliance Manual. These values may not match observed values of existing components in the house but are the defaults for Performance analysis using the E+A/A method.
*sic gable ends to be insulated to R15; attic is to become unvented, indirectly conditioned space with this work.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Bohlen-Casey E+A/A vcapb
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2024-02-20T18:56:07-05:00
Input File Name: 2024-02-ea-4 vcapbP wR22 roofs.rbd22x

CF1R-PRF-01E
(Page 14 of 14)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
I, I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: John Britton	Documentation Author Signature:
Company: Berkeley Energy Compliance	Signature Date: 2024-02-20 16:04:20
Address: 61 Pemberton Street Apt 2 Cambridge, MA 02140	CEA/HERS Certification Identification (if applicable): R16-04-20122
City/State/Zip: Cambridge, MA 02140	Phone: 510-290-6777

RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California: 1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance. 2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.	
Responsible Designer Name: Russ Dotter	Responsible Designer Signature:
Company: Dotter & Solfield	Date Signed: 2024-02-21 10:21:29
Address: 4801 Park Blvd. Oakland, CA 94602	License: C26401
City/State/Zip: Oakland, CA 94602	Phone: 510-530-9231

Digitally signed by CaCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.



Registration Number: 204-P010020207A-000-000-0000000-0000

Registration Date/Time: 2024-02-21 10:21:29

HERS Provider: CaCERTS Inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Report Version: 2022.0.000
Schema Version: rev 2020501

Report Generated: 2024-02-20 15:56:51

Revisions
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2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)(1):	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA WDMA/CSA 1011.5.2/A440-2011.
§ 110.6(a)(2):	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(c).
§ 110.6(b):	Field-fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6.A, 110.6.B, or J44.5 for exterior doors. They must be caulked under weatherstripping.
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weatherstripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(b):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(c):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per § 10-113 when the installation of a cool roof is specified on the CFR.
§ 110.8(d):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 110.9(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 5-6 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
§ 150.0(b):	Loose-Fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102.
§ 150.0(d):	Masonry walls must meet Tables 150.0.A or B.
§ 150.0(e):	Raised-Floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g):	Vapor Retarder. In climate zones 1 through 10, the earth floor or unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(g).
§ 150.0(h):	Vapor Retarder. In climate zones 14 and 18, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and vented attics with air-permeable insulation.
§ 150.0(i):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.

Fireplaces, Decorative Gas Appliances, and Gas Logs:

§ 110.5(a):	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(a)(1):	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(a)(2):	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and light-tight damper or combustion-air control device.
§ 150.0(a)(3):	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.

Space Conditioning, Water Heating, and Plumbing Systems:

§ 110.0-4 110.3:	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(c):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2.A through Table 110.2.N.
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the call-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
§ 110.3(a):	Insulation. Unvented space water heater storage tanks and solar water heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(b):	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kWh per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.3(c):	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kWh per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)(1):	Space Conditioning Systems Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be a 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.55 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.
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Ventilation and Indoor Air Quality:

§ 150.0(a)(1):	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(a)(1).
§ 150.0(a)(1B):	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per § 150.0(a)(1). A mechanical damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per § 150.0(a)(1B)(i)(A), CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with § 150.0(a)(1).
§ 150.0(a)(1C):	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and Townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(a)(1C)(i).
§ 150.0(a)(1G):	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonresidential kitchens must have demand-controlled exhaust system meeting requirements of § 150.0(a)(1G)(i)(A), nonresidential kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 150.0(a)(1G)(i)(B). Airflow must be measured by the installer per § 150.0(a)(1G)(i)(C), and rated for sound per § 150.0(a)(1G)(i)(D).
§ 150.0(a)(1H):	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(a)(1C) must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminal(s) per Reference Residential Appendix RA3.7. Whole-dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 7.2 at no less than the minimum airflow rate required by § 150.0(a)(1C).
§ 150.0(a)(2):	Field Verification and Diagnostic Testing. Whole-dwelling unit ventilation airflow, vented range hood airflow and sound ratings, and HRV and ERV fan efficiency must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 150.0(a)(1G).

Pool and Spa Systems and Equipment:

§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.
§ 110.4(b)(1):	Piping. Any pool or spa heating system or equipment must be installed with at least 35 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future roller heating.
§ 110.4(b)(2):	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)(3):	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(b):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

Lighting:

§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
§ 150.0(a)(1A):	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0.A, except lighting integral to exhaust fans, kitchen range hoods, built-in mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting integral to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(a)(1B):	Screw-based luminaires. Screw-based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
§ 150.0(a)(1C):	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw-based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 10-118 must also be met.
§ 150.0(a)(1D):	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JAS elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(a)(1E):	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(a)(1F):	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(a).

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(c):	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(c); at least four branch circuits must be identified and have their source connected at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(d):	Heat Pump Space Heater Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready"; and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(e):	Electric Clothes Dryer Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready"; and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.
§ 150.0(h)(1):	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume, the SMACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.0(h)(2).
§ 150.0(h)(3A):	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)(3B):	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(i):	Water Piping, Solar Water-Heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 10-111 of the California Plumbing Code.
§ 150.0(j):	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by § 120.3(b). Insulation exposed to weather must be water resistant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-erectable casing or sleeve.
§ 150.0(k):	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2' higher than the hot line of the water heater.
§ 150.0(l):	Solar Water-Heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d):	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)(1):	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct closure system that meets the applicable UL requirements, or a tested sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/2". If mastic or tape is used. Blanking cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed.
§ 150.0(m)(2):	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)(3):	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)(4):	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)(5):	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and exhaust shaft vents.
§ 150.0(m)(6):	Protection of Insulation. Insulation must be protected from damage due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water resistant and solar radiation-resistant coating.
§ 150.0(m)(10):	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous inner or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)(11):	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)(12):	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if rated per Equation 150.0.A. Clean-filter pressure drop and labeling must meet the requirements in § 150.0(m)(12). Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to prevent air from bypassing the filter.

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(k)(1G):	Screw-based luminaires. Screw-based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
§ 150.0(k)(1H):	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JAS elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)(1I):	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0.A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)(2A):	Interior Switches and Controls. All forward phase dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)(2B):	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.
§ 150.0(k)(2C):	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off.
§ 150.0(k)(2D):	Multiple Controls. Controls must not bypass a dimmer, occupancy sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)(2E):	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)(2F):	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)(2).
§ 150.0(k)(2G):	Automatic Shut-off Controls. In bedrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)(2H):	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)(2I):	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and matched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)(3A):	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)(4):	Internally Illuminated Address Signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)(5):	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.9, 130.1, 130.4, 140.8, and 141.0.

Solar Readiness:

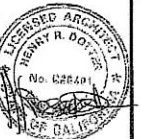
§ 110.10(a)(1):	Single-Family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(d).
§ 110.10(b)(1):	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet and no less than 150 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.
§ 110.10(b)(2):	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)(3A):	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)(3B):	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the plan view.
§ 110.10(b)(4):	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conductors from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(d) must be provided to the occupant.
§ 110.10(d):	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e):	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."
§ 110.10(f):	Electric and Energy Storage Ready.

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REVISIONS	BY

Botter & Selfield
Architecture + Design
4801 PARK BOULEVARD
OAKLAND, CALIFORNIA 94662
PHONE 510 530 9231 FAX 510 530 9233

DOYLEN-GADLEY RESIDENCE
5987 PARK AVE., OAKLAND, CA



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Water Efficiency and Conservation

4.303.1 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the following requirements:

- Waters Closets: ≤ 1.28 gal/flush
- Single Showerheads: ≤ 1.8 gpm @ 80 psi
- Multiple Showerheads: combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gpm @ 80 psi or only one shower outlet is to be in operation at a time

Material Conservation and Resource Efficiency

4.405.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.

4.408.1 Construction Waste Reduction. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4. Exceptions: Excavated soil and land-clearing debris.

4.408.2 Construction Waste Management Plan. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be

updated as necessary and shall be available during construction for examination by the enforcing agency.

- Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
- Specify if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
- Identify diversion facilities where the construction and demolition waste material will be taken.
- Identify construction methods employed to reduce the amount of construction and demolition waste generated.
- Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 Waste management company. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

4.408.4 Waste stream reduction alternative (LRI). Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 pounds per square foot of the building area shall meet the minimum 65 percent construction waste reduction requirement in Section 4.408.1.

4.408.5 Waste reduction documentation shall be provided to the special inspector which demonstrates compliance mandatory 65% reduction. Waste tags, recycling facility diversion report, and/or completed construction waste workbook will be required.

4.401.1 An operation and maintenance. At the time of final inspection, a manual which includes all of the following shall be placed in the building:

- Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
- Operation and maintenance instructions for; equipment and appliances, roof and yard drainage, space conditioning systems, landscape irrigation systems, and water reuse systems.
- Information on local recycling programs and locations.
- Public transportation and/or carpool options available in the area.
- Educational material on the positive impacts of interior relative humidity between 30-60%.
- Information about water-conserving landscape and irrigation design and controllers which conserve water.
- Instructions for maintaining gutters and downspouts and importance of diverting water at least 5 ft. away from the foundation.
- Information on required routine maintenance measures including caulking, painting, grading around the house, etc.
- Information about state solar energy and incentive programs available.
- A copy of all special inspection verifications required by the enforcing agency or this code.

Pollutant Control

4.504.1 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the site and until final startup of the HVAC equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system.

All interior finishes must comply with CALGreen Division 4.5 Environmental quality requirements and documentation shall be provided to verify that compliant VOC materials have been used.

4.504.2.1 Adhesives, Sealants, and Caulks. Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits in CALGreen Table 4.504.1 or 4.504.2 as applicable.

4.504.2.3 Aerosol paints. Aerosol paints and other coatings shall be compliant with product weighted MIR limits for VOC and other toxic compounds and BAAQMD (Bay Area Air Quality Management District) VOC limits.

4.504.3 Composite wood. Hardwood plywood, particleboard and medium density fiberboard (MDF) products used on the interior or exterior shall meet the requirements for formaldehyde as specified in the AR9's Air Toxics Control Measure for Composite Wood as shown in Table 4.504.5.

4.505.3 Moisture content of building materials. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content.

Mechanical Notes

4.506.1 Bathroom Exhaust Fans (full bathrooms). Each bathroom (with tub or shower) must be mechanically ventilated with a humidity-controlled Energy Star compliant exhaust fan which terminates outside of the building unless otherwise a component of a whole house ventilation system.

TABLE 4.504.1
ADHESIVE VOC LIMITS^{1,2}
Less Water and Less Exempt Compounds in Grams per Liter

ADHESIVE VOC LIMITS ^{1,2}	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	450
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	350
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Wood material (except wood)	50
Porous	50
Fiberglass	50

TABLE 4.504.2
SEALANT VOC LIMIT
Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	VOC LIMIT
Architectural	250
Marine deck	750
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
SEALANT PRIMERS	
Architectural	250
Nonporous	750
Formos	275
Modified bituminous	500
Marine deck	750
Other	750

TABLE 4.504.3
VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{1,2}
Grams of VOC per Liter of Coating, Less Water and Less Exempt Compounds

COATING CATEGORY	VOC LIMIT
Flat coatings	50
Nonflat coatings	100
Nonflat high solids coatings	150
SPECIALTY COATINGS	
Aluminum roof coatings	400
Basement specialty coatings	400
Bituminous roof coatings	50
Bituminous roof primers	350
Bond breakers	350
Concrete curing compounds	350
Concrete/masonry sealers	100
Driveway sealers	50
Dry fog coatings	150
Flux finishing coatings	350
Fire resistive coatings	350
Form release coatings	250
Form release compounds	250
Graphic arts coatings (sign paints)	500
High temperature coatings	420
Industrial maintenance coatings	250
Low solids coatings ¹	120
Magnetic cement coatings	450
Mastic texture coatings	100
Metallic pigmented coatings	500
Multicolor coatings	250
Pre-treatment wood primers	420
Primers, sealers, and undercoats	100
Reactive penetrating sealers	350
Recycled coatings	250
Roof coatings	50
Rust preventive coatings	250
Shells	
Clear	730
Opaque	150
Specialty primers, sealers and undercoats	100
Spalls	250
Stone consolidants	450
Swimming pool coatings	340
Traffic marking coatings	100
Tub and tile refinishing coatings	420
Waterproofing membranes	250
Wood coatings	275
Wood preservatives	350
Zinc-rich primers	340

- Grams of VOC per liter of coating, including water and including exempt compounds.
- The specified limits remain in effect unless revised limits are listed in subsequent columns in this table.
- Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

TABLE 4.504.5
FORMALDEHYDE LIMITS¹
Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
Hardwood plywood veneer core	0.05
Hardwood plywood composite core	0.05
Particleboard	0.09
Medium density fiberboard	0.11
Thin medium density fiberboard ²	0.13

- Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as stated in accordance with ASTM E1333. For additional information, see California Code of Regulations, Title 17, Sections 93120 through 93121.02.
- This medium density fiberboard has a maximum thickness of 1/8 inch (3 mm).

GREEN BUILDING ACKNOWLEDGEMENTS

Project Name: Bohlen-Casey Residence
Project Address: 5932 Park Ave., Richmond CA 94805
Project Description: Addition/Alteration to Existing SFD

SECTION 1 - DESIGN VERIFICATION

Complete all lines of Section 1 - "Design Verification" and submit the completed checklist (Columns 1 and 2) with the plans and building permit application to the Building Department.

The CALGreen special inspector has reviewed the plans and certifies that the items checked above are hereby incorporated into the project plan to be implemented into the project in accordance with the requirements set forth in the 2022 California Green Building Standards Code Mandatory Measures as adopted by Contra Costa County.

Signature of CalGreen Special Inspector

Michael Tomita

CalGreen Special Inspector's Name (Please Print)

8833061

CalGreen Special Inspector's Email Address

8833061

CalGreen Certification No.

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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (July 2024 Supplement)

CHAPTER 3 GREEN BUILDING STANDARDS

SECTION 3.1 GENERAL

3.1.1 SCOPE. The standards in this chapter shall apply to all new construction and additions to existing buildings, including but not limited to, single-family detached homes, townhomes, and multi-family residential buildings. The standards shall not apply to existing buildings, unless specifically stated otherwise.

3.1.2 ADDITIONAL REQUIREMENTS. The standards in this chapter shall be applied in conjunction with the California Building Standards Code, including the California Building Code, California Mechanical Code, California Electrical Code, California Fire Code, and California Energy Code.

3.1.3 EXEMPTIONS. The standards in this chapter shall not apply to the following:

- Buildings with a gross floor area of less than 1,000 square feet.
- Buildings that are not occupied by humans.
- Buildings that are not subject to the California Building Standards Code.
- Buildings that are not subject to the California Energy Code.

3.1.4 COMPLIANCE. The standards in this chapter shall be applied in accordance with the following:

- The standards shall be applied in accordance with the California Building Standards Code.
- The standards shall be applied in accordance with the California Energy Code.
- The standards shall be applied in accordance with the California Mechanical Code.
- The standards shall be applied in accordance with the California Electrical Code.
- The standards shall be applied in accordance with the California Fire Code.

3.1.5 VERIFICATION. The standards in this chapter shall be verified by a qualified professional, such as a building official, engineer, or architect.

3.1.6 ENFORCEMENT. The standards in this chapter shall be enforced by the local building official.

3.1.7 APPLICABILITY. The standards in this chapter shall apply to all new construction and additions to existing buildings, including but not limited to, single-family detached homes, townhomes, and multi-family residential buildings.

3.1.8 ADDITIONAL REQUIREMENTS. The standards in this chapter shall be applied in conjunction with the California Building Standards Code, including the California Building Code, California Mechanical Code, California Electrical Code, California Fire Code, and California Energy Code.

3.1.9 EXEMPTIONS. The standards in this chapter shall not apply to the following:

- Buildings with a gross floor area of less than 1,000 square feet.
- Buildings that are not occupied by humans.
- Buildings that are not subject to the California Building Standards Code.
- Buildings that are not subject to the California Energy Code.

3.1.10 COMPLIANCE. The standards in this chapter shall be applied in accordance with the following:

- The standards shall be applied in accordance with the California Building Standards Code.
- The standards shall be applied in accordance with the California Energy Code.
- The standards shall be applied in accordance with the California Mechanical Code.
- The standards shall be applied in accordance with the California Electrical Code.
- The standards shall be applied in accordance with the California Fire Code.

3.1.11 VERIFICATION. The standards in this chapter shall be verified by a qualified professional, such as a building official, engineer, or architect.

3.1.12 ENFORCEMENT. The standards in this chapter shall be enforced by the local building official.

3.1.13 APPLICABILITY. The standards in this chapter shall apply to all new construction and additions to existing buildings, including but not limited to, single-family detached homes, townhomes, and multi-family residential buildings.

3.1.14 ADDITIONAL REQUIREMENTS. The standards in this chapter shall be applied in conjunction with the California Building Standards Code, including the California Building Code, California Mechanical Code, California Electrical Code, California Fire Code, and California Energy Code.

3.1.15 EXEMPTIONS. The standards in this chapter shall not apply to the following:

- Buildings with a gross floor area of less than 1,000 square feet.
- Buildings that are not occupied by humans.
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3.1.17 VERIFICATION. The standards in this chapter shall be verified by a qualified professional, such as a building official, engineer, or architect.

3.1.18 ENFORCEMENT. The standards in this chapter shall be enforced by the local building official.

3.1.19 APPLICABILITY. The standards in this chapter shall apply to all new construction and additions to existing buildings, including but not limited to, single-family detached homes, townhomes, and multi-family residential buildings.

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DRAWING INDEX

S0	DRAWING INDEX, STRUCTURAL NOTES, SYMBOLS LEGEND, AND ABBREVIATIONS
S1.0	TYPICAL DETAILS
S1.1	TYPICAL DETAILS
S1.2	TYPICAL DETAILS
S2.0	FIRST FLOOR FRAMING AND FOUNDATION PLAN
S2.1	SECOND FLOOR FRAMING PLAN
S2.2	ROOF FRAMING PLAN
S3.0	CUSTOM DETAILS
S3.1	CUSTOM DETAILS
S3.2	CUSTOM DETAILS

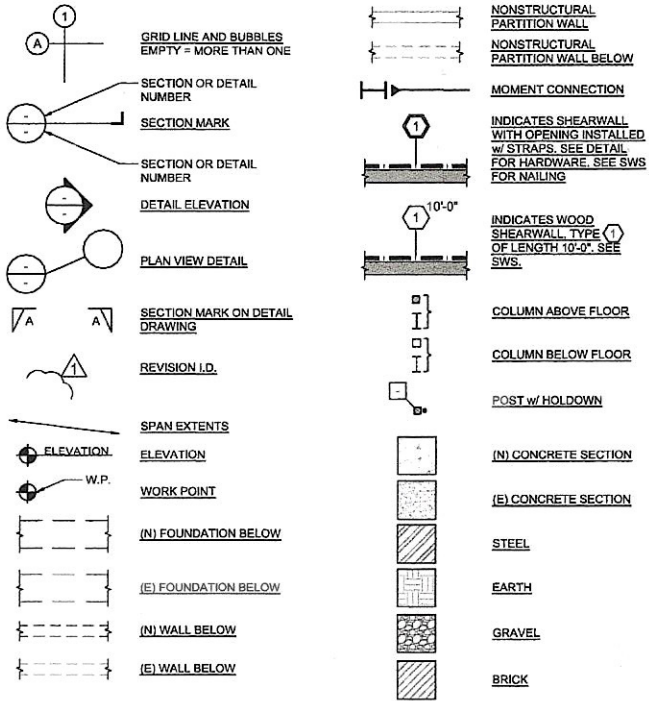
STRUCTURAL NOTES

1. GENERAL
- A. CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.
- B. THESE NOTES APPLY TO ALL DRAWINGS AND GOVERN UNLESS OTHERWISE NOTED OR SPECIFIED.
- C. VERIFY ALL EXISTING CONDITIONS AND PROPOSED DIMENSIONS AT JOB SITE. COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS BEFORE COMMENCING WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES AND DO NOT PROCEED WITH AFFECTED WORK UNTIL THEY ARE RESOLVED. DO NOT SCALE DRAWINGS.
- D. UNLESS OTHERWISE SHOWN OR NOTED, ALL TYPICAL DETAILS SHALL BE USED WHERE APPLICABLE.
- E. ALL DETAILS SHALL BE CONSIDERED TYPICAL AT SIMILAR CONDITIONS.
- F. SAFETY MEASURES: AT ALL TIMES THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF THE PERSONS AND PROPERTY, PROVIDING NECESSARY SHORING AND BRACING, AND FOR ALL NECESSARY INDEPENDENT ENGINEERING REVIEWS OF THESE CONDITIONS. THE ENGINEER'S JOB SITE REVIEW IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
- G. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ALL DAMAGE SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
- H. CONTRACTOR SHALL BRING OMISSIONS OR DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS TO THE STRUCTURAL ENGINEER'S ATTENTION PRIOR TO PROCEEDING WITH THE WORK.
2. TESTS & INSPECTIONS
- A. PROVIDE TESTS AND SPECIAL INSPECTIONS FOR ALL ITEMS AS REQUIRED BY THE CALIFORNIA BUILDING CODE 2022 EDITION CHAPTER 17.
- B. THE FOLLOWING SPECIFIC ITEMS SHALL BE INSPECTED BY THE ENGINEER OF RECORD OR QUALIFIED INSPECTOR
1. CONTINUOUS OBSERVATION OF THE INSTALLATION OF EPOXY RODS USED FOR HOLDOWNS
 2. PLACEMENT OF REINFORCING STEEL
 3. PLACEMENT OF HOLDOWNS AND ANCHOR BOLTS
 4. SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS
- C. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AND ENSURING THAT ALL REQUIRED TESTING & INSPECTION IS PERFORMED TO THE SATISFACTION OF THE INSPECTOR.
- D. **THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO TIME OF INSPECTION.
3. DESIGN BASIS - BUILDING STRUCTURES
- A. CONSTRUCT IN CONFORMANCE WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE AND ALL APPLICABLE LOCAL ORDINANCES.
- B. GENERAL DESIGN DATA:
- | | | |
|--------|----------|----------|
| | DL (PSF) | LL (PSF) |
| ROOF: | 15 | 20 |
| FLOOR: | 12 | 40 |
| DECK: | 12 | 60 |
- C. WIND DESIGN DATA:
- | | |
|-------------------------|-------------|
| BASIC WIND SPEED: | 93 MPH |
| WIND IMPORTANCE FACTOR: | $I_w = 1.0$ |
| WIND EXPOSURE: | C |
- D. SEISMIC DESIGN DATA:
- | | |
|--|------------------------------------|
| SEISMIC IMPORTANCE FACTOR: | $I_s = 1.0$ |
| RISK CATEGORY: | II |
| MAPPED SPECTRAL RESPONSE ACCELERATION: | $S_s = 2.291$ $S_1 = 0.893$ |
| SITE CLASS: | D (DEFAULT) |
| SPECTRAL RESPONSE COEFFICIENTS: | $S_{DS} = 1.001$ $S_{D1} = 1.833$ |
| SEISMIC DESIGN CATEGORY: | E |
| BASIC SEISMIC FORCE RESISTING SYSTEM(S): | WOOD STRUCTURAL PANEL SHEARWALLS |
| RESPONSE MODIFICATION FACTOR(S): | $R = 6.5$ |
| SEISMIC RESPONSE COEFFICIENT(S): | $C_s = 0.282$ (STRENGTH) |
| DESIGN BASE SHEAR: | 0.197W (ASD) |
| ANALYSIS PROCEDURE USED: | EQUIVALENT LATERAL FORCE PROCEDURE |
4. SELECT FILL AND SITE PREPARATION
- A. STRIP THE AREA TO BE BUILT OVER OF ALL ORGANIC MATERIAL AND TOP SOIL.
- B. SCARIFY THE TOP 6" OF THE STRIPPED SURFACE; BRING TO THE CORRECT MOISTURE CONTENT, THEN RECOMPACT TO AT LEAST 95% UNDER FOOTINGS AND 90% ELSEWHERE.
- C. FILL MATERIAL TO BE PLACED IN 6" LAYERS AND COMPACTED.
- D. FILL MATERIAL SHALL BE FREE OF PLASTIC CLAYS, VEGETATION, AND OTHER DELETERIOUS MATERIAL; IT SHALL BE OF SUCH QUALITY THAT IT WILL COMPACT THOROUGHLY WHEN WATERED AND ROLLED. THE FILL SHALL NOT CONTAIN ROCKS OR LUMPS OVER 2" IN GREATEST DIMENSION.
- E. STEP CONTINUOUS FOOTINGS PER TYPICAL DETAILS. DO NOT SLOPE FOOTINGS.
5. FOUNDATIONS
- A. THE FOUNDATION DESIGN IS BASED UPON CHAPTER 18 OF THE CALIFORNIA BUILDING CODE.
5. VERTICAL BEARING: 1500 PSF
- B. EXCEPT WHERE OTHERWISE SHOWN, EXCAVATIONS SHALL BE MADE AS NEAR AS POSSIBLE TO THE NEAT LINES REQUIRED BY THE SIZE AND SHAPE OF THE STRUCTURE. ALL FOUNDATIONS SHALL BE POURED WITHOUT THE USE OF SIDE FORMS WHEREVER POSSIBLE. IF THE TRENCHES CANNOT STAND, FULLY FORM SIDES TO DIMENSIONS SHOWN.
- C. DO NOT ALLOW WATER TO STAND IN TRENCHES. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE CONCRETE IS CAST, EXCAVATE SOFTENED MATERIAL AND REPLACE WITH PROPERLY COMPACTED BACKFILL OR CONCRETE AT NO COST TO OWNER.

6. CONCRETE
- A. REINFORCE ALL CONCRETE. INSTALL ALL INSERTS, BOLTS, ANCHORS, AND REINFORCING AND SECURELY TIE PRIOR TO PLACING CONCRETE.
- B. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT.
- C. CONCRETE SHALL BE HARDROCK CONCRETE, USING PORTLAND CEMENT TYPE I OR II LOW ALKALINE AND SHALL ATTAIN AN ULTIMATE COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. MINIMUM CEMENT CONTENT = 4.5 SACKS/CU.YD. FLYASH MAY BE SUBSTITUTED FOR UP TO 25% WEIGHT OF THE CEMENT CONTENT. MAXIMUM SLUMP = 4" AGGREGATE SIZE = MAXIMUM SIZE APPROPRIATE FOR FORM & REBAR CLEARANCE.
- D. CONCRETE SHALL BE CONTINUOUSLY CURED FOR 10 DAYS AFTER PLACING IN ANY APPROVED MANNER, INCLUDING CURING COMPOUND, CURING PAPER, ETC. NOTE: FOOTINGS ARE EXCEPTED FROM THIS REQUIREMENT.
- E. CONDUITS OR PIPES (O.D.) WITHIN SLAB SHALL NOT EXCEED 30% OF SLAB THICKNESS AND SHALL BE SPACED AT LEAST FOUR-DIAMETER APART, UNLESS SPECIFICALLY DETAILED OTHERWISE.
- F. VERIFY ALL CONCRETE WORK DIMENSIONS WITH ARCHITECTURAL DRAWINGS BEFORE POURING CONCRETE.
7. REINFORCING STEEL
- A. ALL REINFORCING STEEL BARS SHALL CONFORM WITH THE STANDARD SPECIFICATIONS FOR DEFORMED BILLET STEEL FOR CONCRETE REINFORCEMENT, ASTM DESIGNATION A615 OR A706 FOR SHEAR WALLS AND REINFORCING TO BE WELDED. BARS #5 AND LARGER SHALL BE GRADE 60. ALL OTHER BARS SHALL BE GRADE 40, UNLESS OTHERWISE NOTED.
- B. WIRE MESH SHALL CONFORM WITH ASTM A185-64.
- C. SUITABLE DEVICES OF SOME STANDARD MANUFACTURE SHALL BE USED TO HOLD REINFORCEMENT IN ITS TRUE HORIZONTAL AND VERTICAL POSITIONS. THESE DEVICES SHALL BE SUFFICIENTLY RIGID AND NUMEROUS TO PREVENT DISPLACEMENT OF THE REINFORCEMENT DURING PLACING OF CONCRETE.
- D. LAP SPlice ALL BARS TO CLASS B SPlice AND 2'-0" MINIMUM UNLESS OTHERWISE NOTED. PROVIDE 1/2" CLEARANCE BETWEEN PARALLEL BARS.
- E. UNLESS OTHERWISE NOTED, MAINTAIN COVERAGE TO FACE OF BARS AS FOLLOWS:
1. 3" WHERE CONCRETE IS DEPOSITED AGAINST EARTH EXCEPT SLAB-ON-GRADE
 2. 2" WHERE CONCRETE IS EXPOSED TO EARTH BUT FORMED
 3. 1 1/2" FOR BEAMS, COLUMNS AND EXTERIOR SURFACES
 4. 3/4" FOR INTERIOR SLABS, JOISTS AND WALLS
- F. ALL SLABS ON GRADE SHALL HAVE CONTROL JOINTS TO CREATE APPROXIMATELY 20-FOOT SQUARES, UNLESS OTHERWISE NOTED ON THE PLANS.
- G. UNLESS DETAILED OTHERWISE, REINFORCING STEEL IN THE CONTINUOUS BEAMS, GRADE BEAMS, AND SPANDRELS SHALL HAVE TOP STEEL SPliced AT THE MIDSPAN, AND THE BOTTOM STEEL SPliced OVER SUPPORTS (48 BAR DIAMETER SPlice MINIMUM). AT DISCONTINUOUS ENDS, THE TOP STEEL SHALL BE BENT DOWN 12-DIAMETER OR 12" MINIMUM, WHICHEVER IS GREATER.
8. FRAMING LUMBER (UNLESS OTHERWISE NOTED)
- A. ALL FRAMING LUMBER SHALL BE GRADED PER WCLB GRADING RULES NO. 16 WITH MAXIMUM MOISTURE CONTENT OF 19% AT THE TIME OF INSTALLATION.
- $F_b = 2400$ PSI
 $F_v = 165$ PSI
 $E = 1,800,000$ PSI
- B. ALL 4x POSTS AND BEAMS SHALL BE DOUGLAS FIR, #2 OR BETTER. ALL 6x OR LARGER BEAMS AND POSTS SHALL BE DOUGLAS FIR, #1 OR BETTER.
- C. ALL FLOORS, ROOFS, AND CEILING JOISTS OR RAFTERS SHALL BE DOUGLAS FIR, #2 OR BETTER.
- D. ALL STUDS, PLATES, ETC. SHALL BE DOUGLAS FIR, #2 OR BETTER.
- E. ALL FRAMING EXPOSED TO WEATHER SHALL BE PRESSURE-TREATED DOUGLAS FIR UNLESS OTHERWISE NOTED ON PLANS OR DETAILS.
- F. ALL TIMBER PLACED AGAINST BRICK, MASONRY, OR CONCRETE CONSTRUCTION SHALL BE PRESSURE-TREATED.
- G. ALL EXTERIOR DECKING SHALL BE REDWOOD SELECT, PRESSURE-TREATED, OR MANUFACTURED DECKING; REFER TO THE ARCHITECTURAL DRAWINGS.
9. ROUGH CARPENTRY
- A. ALL CONSTRUCTION SHALL COMPLY WITH STANDARDS OF QUALITY REQUIREMENTS OF THE CALIFORNIA BUILDING CODE, SECTION 2303.
- B. CONVENTIONAL CONSTRUCTION PROVISIONS NOT SPECIFICALLY DETAILED ON THE PLANS SHALL BE IN COMPLIANCE WITH THE CALIFORNIA BUILDING CODE, SECTION 2306.
- C. FOR SCHEDULE OF MINIMUM NAILING SEE TABLE 2304.9.1, CALIFORNIA BUILDING CODE. 16 PENNY VINYL COATED SINKERS MAY BE SUBSTITUTED FOR 16 PENNY BOX OR COMMON NAILS FOR ROUGH FRAMING. SINKERS SHALL NOT BE USED WITH METAL CONNECTORS.
- D. SILLS ON CONCRETE SHALL BE 3X PRESSURE-TREATED DOUGLAS FIR. SILLS SHALL BE FASTENED TO THE CONCRETE WITH A MINIMUM OF TWO FASTENERS PER PIECE. FASTENERS SHALL NOT BE LESS THAN 4 1/2" INCHES NOR FURTHER THAN 9 INCHES FROM END OF PIECE.
- E. PLACE SAWN LUMBER MEMBERS WITH THE CROWN UP.
- F. RETIGHTEN ALL BOLTS PRIOR TO CLOSING IN WALLS.
- G. ALL FASTENERS IN CONTACT WITH PRESERVATIVE TREATED AND FIRE RETARDANT TREATED LUMBER, OR PERMANENTLY EXPOSED TO WEATHER SHALL BE OF HOT-DIPPED, ZINC-COATED, GALVANIZED OR STAINLESS STEEL IN ACCORDANCE WITH THE CBC SECTION 2304.9.5
- H. DOUBLE ALL JOISTS UNDER ALL PARALLEL PARTITIONS, UNLESS NOTED OTHERWISE.
- I. BLOCK ALL JOISTS AT SUPPORTS AND UNDER ALL PARTITIONS WITH MINIMUM 2X SOLID BLOCKING. BLOCK AND BRIDGE ROOF JOISTS AT 10 FEET AND FLOOR JOISTS AT 8 FEET UNLESS OTHERWISE NOTED. FOR MANUFACTURED JOISTS, PROVIDE BLOCKING AT AND BETWEEN SUPPORTS PER THE MANUFACTURERS SPECIFICATIONS
- J. ALL TIMBER FASTENERS NOT SPECIFICALLY DETAILED ON THE DRAWINGS SHALL BE SIMPSON STRONG TIE, INC. STANDARD FASTENERS OR APPROVED EQUAL.
- K. PROVIDE 3"x3"x0.229" PLATE WASHERS FOR ALL BOLTS IN BEARING CONTACT WITH SILL PLATES.
- L. BOLT HOLES SHALL BE BORED NO MORE THAN 1/32 OF AN INCH LARGER THAN THE DIAMETER OF THE BOLT.
- M. DOUBLE TOP PLATES ON ALL EXTERIOR, INTERIOR BEARING, AND INTERIOR SHEAR WALLS SHALL LAP 4'-0" MINIMUM, WITH 12-16D NAILS AT SPlice U.O.N.

10. WOOD STRUCTURAL PANELS
- A. ALL WOOD STRUCTURAL PANELS SHALL BE MARKED WITH THE APPROPRIATE TRADEMARK OF APA AND SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF VOLUNTARY PRODUCT STANDARD PS1, VOLUNTARY PRODUCT STANDARD PS 2 OR APA PRP-108 PERFORMANCE STANDARDS. PANEL THICKNESS, GRADE AND GROUP NUMBER OR SPAN RATING SHALL BE AT LEAST EQUAL TO THAT SHOWN ON THE DRAWINGS. APPLICATION SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF APA.
- B. WOOD STRUCTURAL PANEL SHEETS SHALL HAVE THICKNESS AS SPECIFIED HEREIN OR AS NOTED ON DRAWINGS
- C. WOOD STRUCTURAL PANEL SHEETS AT FLOORS AND ROOFS SHALL BE LAID WITH FACE GRAIN PERPENDICULAR TO JOISTS AND RAFTERS, UNLESS OTHERWISE SPECIFIED ON PLANS.
- D. WOOD STRUCTURAL PANEL SHEETS ON WALLS SHALL BE LAID WITH LONG DIMENSION VERTICAL. BLOCK ALL EDGES. MINIMUM DIMENSION OF PANELS ON WALLS, FLOORS OR ROOF SHALL BE 24".
- E. UNLESS OTHERWISE NOTED ON THE DRAWINGS, TYPICAL ROOF SHEATHING SHALL BE 1/2" THICK WITH SPAN RATING 40/20. EXPOSURE 1 WITH 10D NAILS @ 8" O.C. @ PANEL EDGES AND WITH 10D NAILS @ 12" O.C. IN THE FIELD. PROVIDE PLYCLIPS BETWEEN JOINTS WHERE EDGES ARE NOT BLOCKED.
- F. UNLESS OTHERWISE NOTED ON THE DRAWINGS, TYPICAL FLOOR SHEATHING SHALL BE UNBLOCKED 3/4" STURD-FLOOR WITH SPAN RATING 48/24, EXPOSURE 1, T & G WITH 10D NAILS @ 8" O.C. @ PANEL EDGES AND WITH 10D NAILS @ 12" O.C. IN THE FIELD (CONTRACTOR MAY OMIT T & G WHERE BLOCKED EDGES ARE SPECIFIED ON THE DRAWINGS).
- G. UNLESS OTHERWISE SPECIFIED IN A SHEARWALL SCHEDULE OR STRUCT 1 ON THE DRAWINGS, ALL EXTERIOR SHEATHING SHALL BE 1/2" APA RATED CDX WITH SPAN RATING 24/0 EXPOSURE 1, NAILED WITH 10D @ 8" O.C. PANEL EDGES AND @ 12" O.C. FIELD. SEE SHEAR WALL SCHEDULE WHERE PROVIDED ON PLANS.
11. ENGINEERED LUMBER
- A. ALL MICROLAM (LVL) PARALLAM (PSL), AND TIMBER STRAND (LSL) SHALL HAVE THE FOLLOWING ALLOWABLE DESIGN STRESSES: (AN APPROVED EQUIVALENT MAY BE USED WITH EQUAL OR GREATER STRESS CAPACITIES)
- | | LVL | PSL | LSL |
|-------|-----------------|-----------------|-----------------|
| F_b | = 2600 PSI | = 2900 PSI | = 1700 PSI |
| F_c | = 750 PSI | = 750 PSI | = 680 PSI |
| F_v | = 285 PSI | = 290 PSI | = 400 PSI |
| E | = 2,000,000 PSI | = 2,200,000 PSI | = 1,550,000 PSI |
- B. ALL PSL AND LSL BEAMS SHALL BE SOLID, DIMENSIONS AS SHOWN. ALL LVL BEAMS SHALL BE COMPRISED OF LAMINATED PLIES TO MEET THE DIMENSIONS AS SHOWN FASTENED PER THE MANUFACTURER'S SPECIFICATIONS OR THE DETAILS INCLUDED HEREIN. THE CONTRACTOR MAY USE A SOLID LVL BEAM WITH THE DIMENSIONS AS SHOWN IN- LIEU OF LAMINATED PLIES.
12. GLULAM BEAMS
- A. ALL BEAMS SHALL BE FABRICATED IN ACCORDANCE WITH AITC, STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBERS' (AITC 203), AND U.S. COMMERCIAL STANDARD CS 253 FOR STRUCTURAL GLUED LAMINATED TIMBER. AITC CERTIFICATES SHALL BE FURNISHED TO THE ARCHITECT FOR ALL MEMBERS.
- B. USE 2 INCH NOMINAL LUMBER GRADE COMBINATION V-4 OR V-8, 24F. SLOPE IN GRAIN IN TOP AND BOTTOM 10% OF LAMINATION SHALL NOT EXCEED 1:14. END JOINTS SHALL BE EITHER SCARFED 1:12 OR OFFICE OF ARCHITECTURE-APPROVED FINGER JOINTS.
- $F_b = 2400$ PSI
 $F_v = 165$ PSI
 $E = 1,800,000$ PSI
- FOR EXTERIOR EXPOSURE USE ALASKAN YELLOW CEDAR
- $F_b = 2000$ PSI
 $F_v = 190$ PSI
 $E = 1,500,000$ PSI
- C. MOISTURE CONTENT OF LUMBER SHALL NOT BE LESS THAN 7% OR GREATER THAN 12%.
- D. ALL GLUING SHALL BE DONE IN THE SHOP BY QUALIFIED PERSONNEL AND CONFORM WITH ALL REQUIREMENTS SET OUT IN CS 253-63 (SEE A ABOVE).
- E. SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW.
- F. USE EXTERIOR GLUE UNLESS OTHERWISE SPECIFIED.
- G. USE ARCHITECTURAL APPEARANCE GRADE, WHERE EXPOSED.
13. MANUFACTURED TRUSSES AND TRUSS JOISTS
- A. MANUFACTURED TRUSSES SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH CABO REPORT NO. NER-200.
- B. THE JOISTS SHALL BE CUSTOM DESIGNED TO FIT THE DIMENSIONS WITH THE FOLLOWING DESIGN CRITERIA: MAXIMUM LIVE LOAD DEFLECTION - SPAN OVER 480.
- C. PROVIDE COMPLETE CALCULATIONS PREPARED, STAMPED, AND SIGNED BY A LICENSED ENGINEER.
- D. PROVIDE SHOP DRAWINGS SHOWING LAYOUT AND ALL NECESSARY DETAILS OF DIFFERENT BEARING AND SHEAR TRANSFER CONDITIONS, FOR THE ENGINEER'S REVIEW AND APPROVAL.
- E. THE TRUSS JOISTS AND ENGINEERED LUMBER SHALL BE AS MANUFACTURED BY TRUSS JOIST MACMILLAN OR AN APPROVED EQUIVALENT.

SYMBOLS LEGEND



ABBREVIATIONS

& L	AND ANGLE	INV	INVERT
@	AT	JOINT	JOINT
AB	ANCHOR BOLT	KIP	1,000 POUNDS
ACI	AMERICAN CONCRETE INSTITUTE	KSI	KIPS PER SQUARE INCH
ADDL	ADDITIONAL	LBS	POUNDS
ADJ	ADJACENT	LG	LONG
AIISI	AMERICAN IRON AND STEEL INSTITUTE	LL	LIVE LOAD
AITC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION	LLH	LONG LEG HORIZONTAL
ALT	ALTERNATE	LLV	LONG LEG VERTICAL
APPROX	APPROXIMATE	LN	LINE
ARCH	ARCHITECT, ARCHITECTURAL	LSL	TIMBERSTRAND LUMBER
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS	LT	LIGHT
AWS	AMERICAN WELDING SOCIETY	LVL	MICROLAM LUMBER
BETW	BETWEEN	LWC	LIGHT WEIGHT CONCRETE
BLDG	BUILDING	MATL	MATERIAL
BM	BEAM	MAX	MAXIMUM
BOF	BOTTOM OF FOOTING	MB	MACHINE BOLT
BOTT	BOTTOM	MECH	MECHANICAL
BS	BOTH SIDES	MFT	MANUFACTURER
BYD	BEYOND	MIN	MINIMUM
C	CHANNEL PREFIX	MISC	MISCELLANEOUS
CANT	CANTILEVER	MTL	METAL
CBC	CALIFORNIA BUILDING CODE	#	NUMBER
CJ	CONSTRUCTION JOINT	(N)	NEW
CL	CENTERLINE	NIC	NOT IN CONTRACT
CLR	CLEAR	NO	NUMBER
COL	COLUMN	NOM	NOMINAL
CONC	CONCRETE	NS	NEAR SIDE
CONN	CONNECTION	NSG	NON-SHRINK GROUT
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS, CONTINUITY	OC	ON CENTER
CONT'D	CONTINUED	OD	OUTSIDE DIAMETER
CTR	CENTER	OPNG	OPENING
CTSK	COUNTERSINK	OPP	OPPOSITE
CUB	CUBIC	PDF	POWER DRIVEN FASTENERS
DBL	DOUBLE	P	PLATE
DBLR	DOUBLER	PL	PROPERTY LINE
DET	DETAIL	PW	PLYWOOD
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DLAD	DEAD LOAD	PSI	POUNDS PER SQUARE INCH
DIAG	DIAGONAL	PT	POINT
DIST	DISTANCE	QTY	QUANTITY
DN	DOWN	RAD	RADIUS
DO	DITTO	REBAR	CONCRETE REINFORCEMENT
DEEP	DEEP	REIN	REINFORCING
DWG	DRAWING	REQD	REQUIRED
(E)	EXISTING	RJ	ROOF JOIST
EA	EACH	SCH	SCHEDULE
EF	EACH FACE	SAD	SEE ARCHITECTURAL DRAWINGS
EN	EDGE NAILING	SCD	SEE CIVIL DRAWING
EJ	EXPANSION JOINT	SECT	SECTION
ELEV	ELEVATION	SED	SEE ELECTRICAL DRAWINGS
ENGR	ENGINEER	SHT	SHEET
EQ	EQUAL	SJ	SAW CUT JOINT
ES	EACH SIDE	SIM	SIMILAR
EW	EACH WAY	SMD	SEE MECHANICAL DRAWINGS
EWB	EACH WAY BOTTOM	SMS	SHEET METAL SCREWS
EWM	EACH WAY MIDDLE	SPA	SPACING
EWT	EACH WAY TOP	SQ	SQUARE
EXP	EXPANSION	STAGG	STAGGER
EXT	EXTERIOR	STD	STANDARD
FF	FINISH FLOOR	STIFF	STIFFENER
FIN	FINISH	STIRR	STIRRUP
FJ	FLOOR JOIST	STL	STEEL
FLN	FIELD NAILING	STRUCT	STRUCTURAL
FLR	FLOOR	SWS	SHEARWALL SCHEDULE
FOC	FACE OF CONCRETE	T&B	TOP AND BOTTOM
FS	FACE OF WALL	THK	THICK, THICKNESS
FRAM'G	FRAMING	THRD	THREAD, THREADED
FS	FAR SIDE	TOC	TOP OF CONCRETE
FT	FEET	TOP	TOP OF FOOTING
FTG	FOOTING	TOS	TOP OF STEEL
GA	GAUGE	TOW	TOP OF WALL
GALV	GALVANIZED	TS	STRUCTURAL TUBE (HSS SIM)
GRID	GRID LINE	TYP	TYPICAL
GB	GRADE BEAM	UON	UNLESS OTHERWISE NOTED
GRD	GIRDER	VP	VAPOR BARRIER
GRD	GROUND	VIF	VERIFY IN FIELD
HD	HOLDOWN	W	WITH
HK	HOOK	WA	WEDGE ANCHORS
HORIZ	HORIZONTAL	WD	WIDE
HP	HIGH POINT	WF	WIDE FLANGE
HSS	HOLLOW STEEL SECTION	WIO	WITHOUT
ID	INSIDE DIAMETER	WP	WORK POINT
INT	INTERIOR	WT	WEIGHT, OR WT SECTION PREFIX
		WWF	WELDED WIRE FABRIC
		W	WIDE, SIDE FLANGE PREFIX

Simplengi
(415)754-3644

Owner
Turner Bohlen & Liz Casey

Project Address
5932 Park Ave,
Richmond, CA 94805

BOHLEN-CASEY RESIDENCE

Rev.	Issue	Date
	PERMIT	12/09/2024
△	PLAN CHECK	02/10/2025
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Project #:	24009
Project Lead:	David Yadegar
email:	david@simplengi.com
Project Designer:	Jon Mendez
email:	jon@simplengi.com
Issue Date:	10/29/2025
Drawing Scale:	None

DRAWING INDEX,
STRUCTURAL NOTES,
SYMBOLS LEGEND,
AND ABBREVIATIONS

S0

Rev.	Issue	Date
PERMIT		12/09/2024
1	PLAN CHECK	02/10/2025
2	FIELD REVISION	10/29/2025



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TYPICAL DETAILS

S1.0

SHEAR WALL SCHEDULE									
MARK	SHEATHING	FRAMING AT PLYWOOD EDGE	EDGE NAILING (EN) w/ 10d	FIELD NAILING (FN) w/ 10d	5/8" Ø A.B. "URFP" OR "FRFP"	SOS SCREW	"A34"	"A35" 1"TP4" OR "LTP5"	"A35" WITH "PH612" SCREWS OR "LS50" WITH "PH612" SCREWS
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
1	1/2" PLYWOOD	ONE SIDE	2x	6" o.c.	12" o.c.	4'-0" o.c.	12" o.c.	10" o.c.	12" o.c.
2	1/2" PLYWOOD	ONE SIDE	3x	4" o.c.	12" o.c.	3'-2" o.c.	10" o.c.	7" o.c.	9" o.c.
3	1/2" PLYWOOD	ONE SIDE	3x	3" o.c.	12" o.c.	2'-9" o.c.	8" o.c.	5" o.c.	6" o.c.
4	1/2" PLYWOOD	ONE SIDE	3x	2" o.c.	12" o.c.	2'-0" o.c.	6" o.c.	4" o.c.	4" o.c.
5	1/2" PLYWOOD	TWO SIDE	3x	4" o.c.	12" o.c.	1'-7" o.c.	5" o.c.	3 1/2" o.c.	4" o.c.
6	1/2" PLYWOOD	TWO SIDE	3x	3" o.c.	12" o.c.	1'-4" o.c.	4" o.c.	2 1/2" o.c.	3" o.c.
7	1/2" PLYWOOD	TWO SIDE	3x	2" o.c.	12" o.c.	1'-0" o.c.	3" o.c.	2" o.c.	2 1/4" o.c.

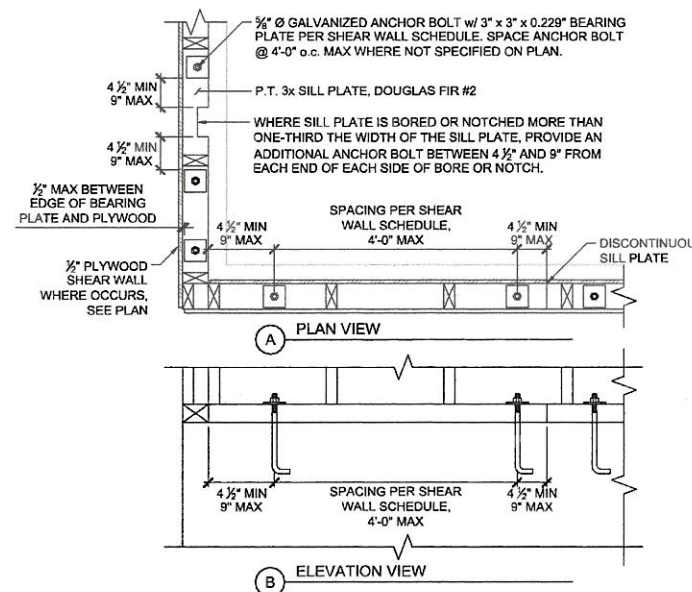
- LEGEND:**
- (A) STRUCTURAL PANEL SHEAR WALL. SEE FLOOR PLANS FOR LOCATION.
 - (B) STRUCTURAL PANEL EDGE NAILING AT PERIMETER OF EACH PLYWOOD SHEET.
 - (C) STRUCTURAL PANEL FIELD NAILING IS TYPICAL ON ALL STUDS, EXCEPT FOR PLYWOOD EDGES.
 - (D) SILL PLATE ATTACHMENT
 - (E) SOLE PLATE ATTACHMENT
 - (F) SIMPSON FRAMING CLIP AT SHEAR WALLS. SEE SHEAR WALL SCHEDULE FOR TYPE AND SPACING. WHERE CLIPS ARE LESS THAN 5" o.c., STAGGER CLIPS ON BOTH SIDES OF WALL.
 - (G) ROOF AND FLOOR STRUCTURAL PANELS TO BE NAILED WITH 10d @ 6" o.c. AT PANEL EDGES.

SHEAR WALL NOTES:

- ALL EXTERIOR WALL TO BE 2" 2x10 CDX STRUCTURAL PANEL SHEAR WALL. TYPE 1 U.O.N.
- PROVIDE 3x STUD, PLATE, AND BLKG AT ADJOINING PANEL EDGES FOR SHEAR WALLS TYPE 2 THROUGH 7. PROVIDE 2x SOLE PLATE AT FLOOR. PANELS APPLIED TO BOTH SIDES OF THE WALL SHALL BE OFFSET SO PANEL EDGES FALL ON DIFFERENT FRAMING MEMBER.
- PROVIDE 1/8" HORIZONTAL GAP BETWEEN ADJOINING PANEL EDGES.
- SOS SCREW SHALL BE 4 1/2" LONG AT 2x PLATE AND 6" LONG AT 3x PLATE. SCREWS SHALL HAVE 7/8" MIN EDGE DISTANCE. MULTIPLE ROWS SHALL BE SPACED 1" APART AND ROWS SHALL BE STAGGERED. BLOCKING/RIM JOIST BELOW TYPE 1 THROUGH 5 SHALL BE 2x OR 1 1/2" LSL MIN. BLOCKING/RIM BELOW TYPE 6 AND 7 SHALL BE 3x OR 2 1/2" LSL MIN.
- SHEAR WALLS FALLING OVER EXISTING FOUNDATION SHALL USE ALL-THREAD RODS MATCHING THE SPECIFIED A.B. DIAMETER U.O.N. SEE EPOXY BOLT SECTION OF THE GENERAL NOTES.
- STAGGER DOUBLE TOP PLATE NAILING TO ENGAGE EACH TOP PLATE, TYP.
- ALL NAILS SPECIFIED SHALL BE COMMON NAILS. NAIL GUN USING CLIPPED HEAD OR SINKER NAILS ARE NOT ACCEPTABLE.
- FOUNDATION ANCHOR BOLTS IN ALL SHEAR WALLS SHALL HAVE 3" x 3" x 0.229" BEARING PLATES UNDER EACH NUT. NUTS SHALL BE TIGHTENED JUST PRIOR TO CLOSING WALL FRAMING.
- ANCHOR BOLT HOLES DRILLED IN SILL PLATE SHALL NOT BE LARGER THAN 1/8" + DIAMETER OF THE BOLT.
- SILL PLATES IN CONTACT WITH CONCRETE SHALL BE 3x PRESSURE-TREATED DOUGLAS FIR #2. USE GALVANIZED ANCHOR BOLT AND NAILS INTO ALL PRESSURE-TREATED WOOD. A 2x PLATE MAY BE USED PROVIDED THE PLATE IS ANCHORED BY 2 TIMES THE NUMBER OF BOLTS LISTED IN THE TABLE ABOVE.
- MINIMUM ANCHOR BOLT EMBEDMENT INTO CONCRETE SHALL BE 7". EPOXIED ALL-THREAD RODS SHALL BE EMBEDDED A MINIMUM OF 6" U.O.N.
- ALL WOOD SHEATHING PANEL EDGES SHALL BE BLOCKED WITH MINIMUM 2x BLOCKING U.O.N.
- PROVIDE 1/2" MINIMUM EDGE DISTANCE FOR ALL SHEATHING AND FRAMING MEMBER EDGE NAILING.
- STUCCO AND/OR EXTERIOR VENEER OVER A WOOD SHEATHING SHEAR WALL SHALL BE WATERPROOFED WITH 2 LAYERS OF FELT PAPER MINIMUM.
- THE SHEAR WALL LENGTH NOTED ON THE FLOOR PLANS INDICATE THE MINIMUM REQUIRED LENGTH REQUIRED BY ENGINEERING DESIGN. THE ACTUAL WALL LENGTH MAY EXCEED THIS LENGTH. NOTIFY ENGINEER IF WALL LENGTH IS SHORTER THAN NOTED.
- NAILS ARE TO BE DRIVEN FLUSH TO THE SHEATHING. IF MORE THAN 20% OF NAILS ARE 1/2" OVERDRIVEN OR IF ANY NAIL IS 3/4" OVERDRIVEN, ADD 1 NEW NAIL FOR EVERY 2 OVERDRIVEN NAILS. IF SPLITTING CONDITION OCCURS, USE STAPLES. IF ADDING NAILS WILL DECREASE SPACING TO 3" OR LESS, ADD ANOTHER STUD TO RECEIVE PLYWOOD END NAILING FOR EACH PLYWOOD EDGE AND CONNECT TO STUD w/ 10d @ 6" o.c.
- WALL TYPES 3 THROUGH 7 REQUIRE PERIODIC SPECIAL INSPECTION OF SHEATHING AND FASTENER INSTALLATION.

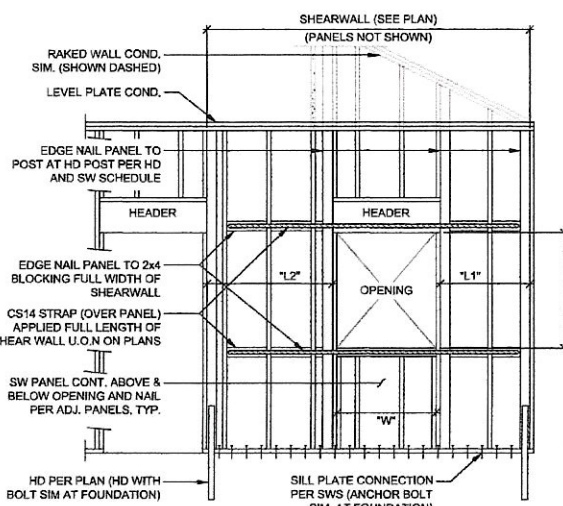
2 SHEARWALL SCHEDULE (SWS)

NTS



4 TYPICAL ANCHOR BOLT LAYOUT

NTS



NOTES: THE DOUBLE HEXAGONAL SHEARWALL SYMBOL ON FRAMING PLANS INDICATES THAT THIS DETAIL SHOULD BE REFERENCED. SHEARWALL LENGTHS ON THE PLAN INDICATE THE SUMMATION OF THE QUALIFYING SHEAR PANELS AND OPENINGS. $L_1 + L_2 + W$. EACH PIER LENGTH L_1 HAS TO BE AT LEAST H/2 IN ORDER TO QUALIFY AS A SHEARWALL PANEL.

8 SHEARWALL w/ OPENING ELEVATION (FTAO)

NTS

5 HOLDOWN SCHEDULE

NTS

HOLDOWN SCHEDULE									
MARK	HOLDOWN HARDWARE	(N) CONCRETE		(E) CONCRETE		MIN POST SIZE		UPLIFT CAPACITY	
		ANCHOR BOLT	EMBED (L _{g, new})	FOOTING (F)	ALL THREAD (L _{g, existing})	4x OPTION	6x OPTION	4x	6x
A	DTT2Z	-	-	-	1/2" Ø 12"	2 - 2x4	2 - 2x6	2145 LBS	
B	HDU2	SSTB24	20 3/8"	-	3/4" Ø 12"	2 - 2x4	2 - 2x6	3075 LBS	
C	HDU4	SB3/4x24	18"	-	3/4" Ø 12"	2 - 2x4	2 - 2x6	4565 LBS	
D	HDU5	SB3/4x24	18"	-	3/4" Ø 12 1/2"	2 - 2x4	2 - 2x6	5645 LBS	
E	HDU8	1/2" BATR	-	9"	2'-3"	-	-	7870 LBS	
F	HDU11	1" BATR	-	11"	2'-9"	-	-	11175 LBS	
G	HDU14	1 1/2" BATR	-	11"	2'-9"	-	-	14390 LBS	

HOLDOWN NOTES:

- INSTALL ALL HOLDOWN HARDWARE PER MANUFACTURER'S INSTRUCTIONS.
- ONLY FULL-HEIGHT POSTS SHALL BE USED FOR HOLDOWN CONNECTIONS.
- PROVIDE SHEARWALL END NAILING PER SHEARWALL SCHEDULE TO ALL POSTS WITH HOLDOWNS.
- HOLDOWNS SHALL BE INSTALLED DIRECTLY ON TOP OF SILL PLATES U.O.N.
- USE COMMON WIRE GAGE NAILS FOR ALL NAILED HOLDOWN CONNECTIONS.
- POSTS SHOWN ARE MINIMUM REQUIREMENTS FOR HOLDOWNS. SHEARWALL TYPE MAY REQUIRE LARGER FRAMING MEMBERS AT PANEL EDGES. SEE SHEARWALL SCHEDULE.
- HOLDOWNS CALLED OUT ON UPPER FLOORS SHALL BE CARRIED DOWN TO FOUNDATION WITH MATCHING HOLDOWN (OR ONE OF GREATER CAPACITY) UNLESS A DIFFERENT HOLDOWN IS SPECIFIED ON PLAN.
- HOLDOWN ANCHORS SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING. BOLT NUT SHOULD BE FINGER-TIGHT PLUS 1/2 TO 3/4 TURN WITH A HAND WRENCH. DO NOT OVER-TORQUE THE NUT.
- WHERE HOLDOWNS ARE CONNECTED TO A WOOD OR STEEL MEMBER BELOW, A 3"x3"x0.229" MIN BEARING PLATE SHALL BE APPLIED TO THE BOTTOM OF THE MEMBER.

NOTES FOR PLACEMENT OF HOLDOWNS INTO EXISTING CONCRETE CONDITION:

- FOR EMBEDMENT INTO EXISTING CONCRETE, USE ALL-THREAD ROD AND SIMPSON SET-3G EPOXY OR APPROVED EQUIVALENT. SEE EPOXY SECTION OF GENERAL NOTES.
- THE HOLE DIAMETER FOR THE ANCHOR SHALL BE DRILLED 1/2" OVERSIZED.

TYPICAL WOOD HEADER SCHEDULE

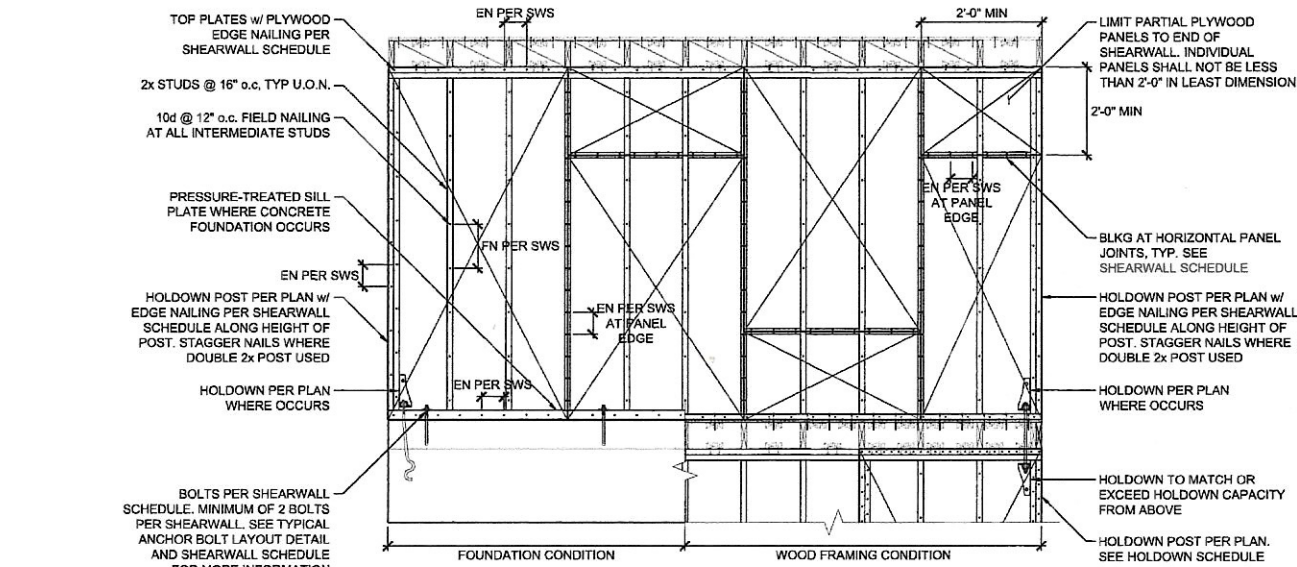
OPENING	AT BEARING WALLS	AT NON-BEARING WALLS
≤ 4'-0"	T x 6	T x 6
4'-1" TO 6'-0"	T x 8	T x 6
6'-1" TO 8'-0"	T x 10	T x 8
8'-1" TO 10'-0"	T x 12	T x 8
10'-1" TO 12'-0"	T x 11 1/8 PSL	T x 8

NOTES:

- T = WALL STUD NOMINAL THICKNESS (EX: FOR 2x4 STUDS, T=4).
- HEADERS SHALL BE DF#1, U.O.N.
- FOR TYPICAL FRAMING DETAILS, SEE 3.

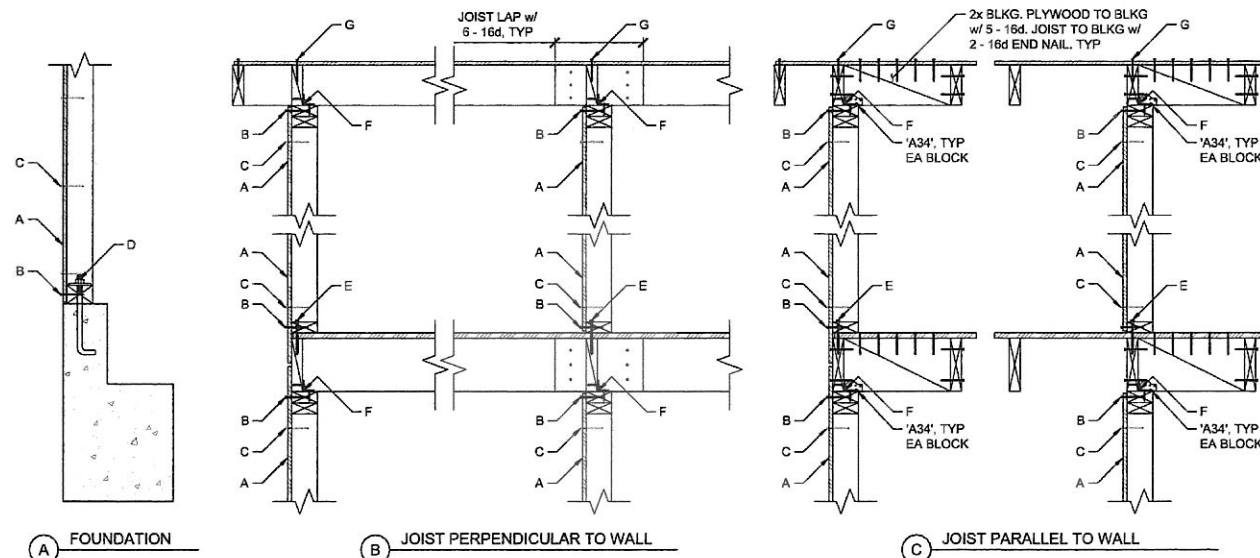
9 TYPICAL WOOD HEADER SCHEDULE

NTS



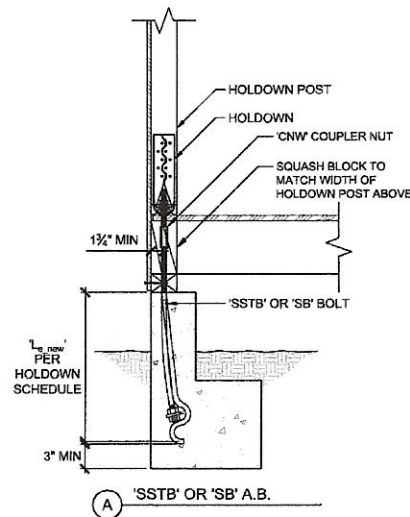
1 SHEARWALL PLYWOOD FRAMING

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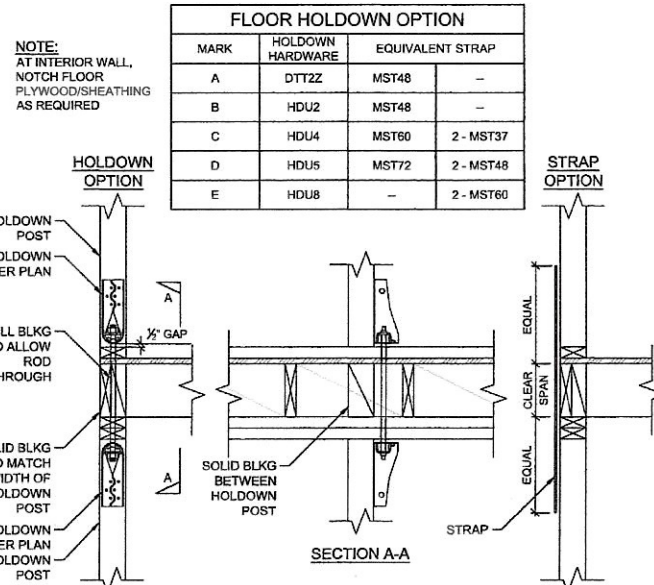
3 TYPICAL FRAMING DETAILS

NTS



6 HOLDOWN INTO (N) CONCRETE

NTS



7 TYPICAL HOLDOWN BETWEEN FLOORS

NTS

8 SHEARWALL w/ OPENING ELEVATION (FTAO)

NTS



REBAR SIZE	d	D	H
#3	$\frac{3}{8}$ "	$1\frac{1}{2}$ "	$2\frac{1}{2}$ "
#4	$\frac{1}{2}$ "	2"	3"
#5	$\frac{5}{8}$ "	$2\frac{1}{2}$ "	$3\frac{3}{4}$ "
#6	$\frac{3}{4}$ "	$4\frac{1}{2}$ "	$4\frac{1}{2}$ "
#7	$\frac{7}{8}$ "	$5\frac{1}{4}$ "	$5\frac{1}{4}$ "
#8	1"	6"	6"

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2	FIELD REVISION	10/29/2025



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email:	david@simplengi.com
Project Designer:	Jon Mendez
email:	jon@simplengi.com
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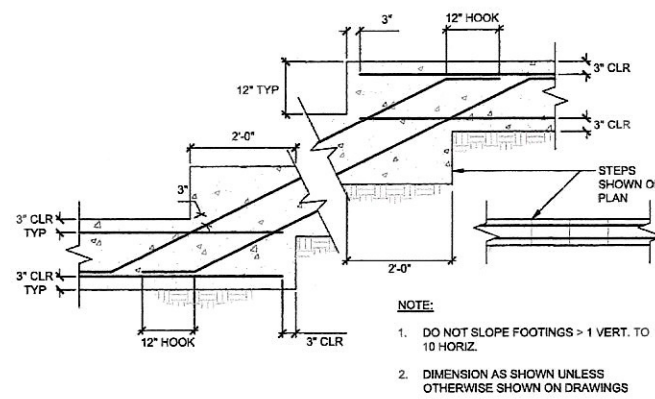
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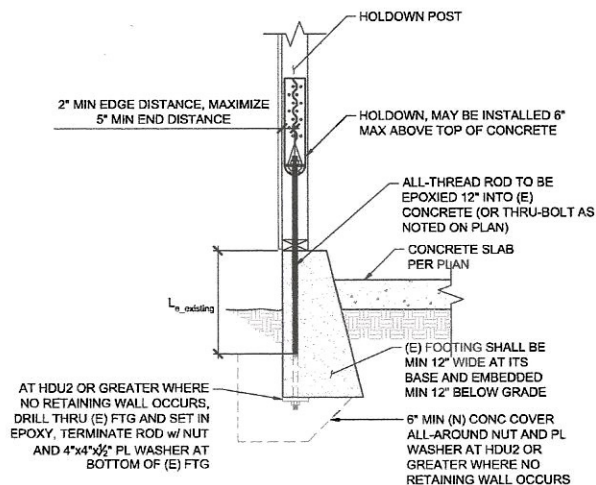
TYPICAL DETAILS

S1.2

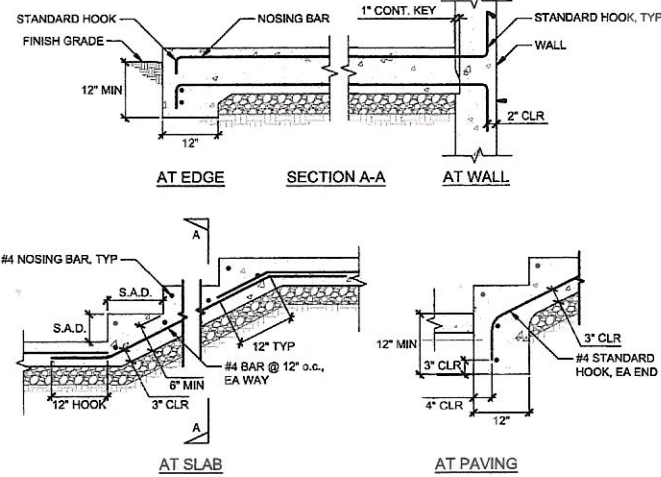


1 TYPICAL STEPS IN FOOTING
NTS

NOTE:
NOTIFY ENGINEER IF EMBEDMENT LENGTH AND CLEARANCE CANNOT BE ACHIEVED DUE TO DEPTH OF EXISTING FOUNDATION.

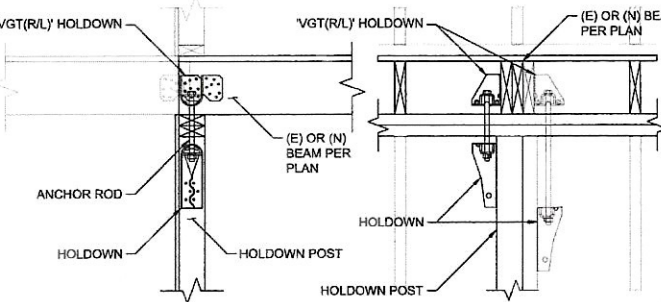


5 HOLDOWN AT EXISTING FOOTING
1" = 1'-0"

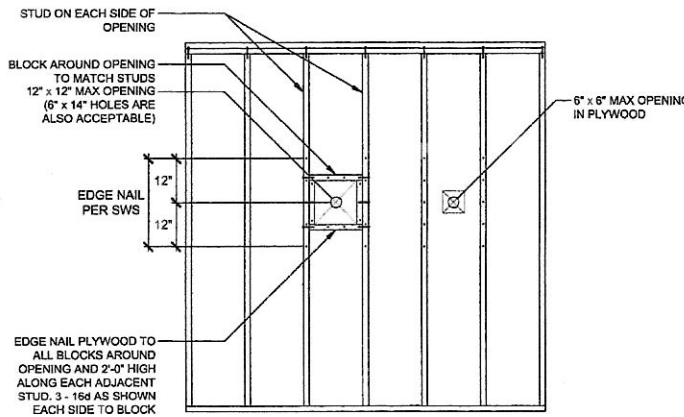


2 CONCRETE STAIRS
NTS

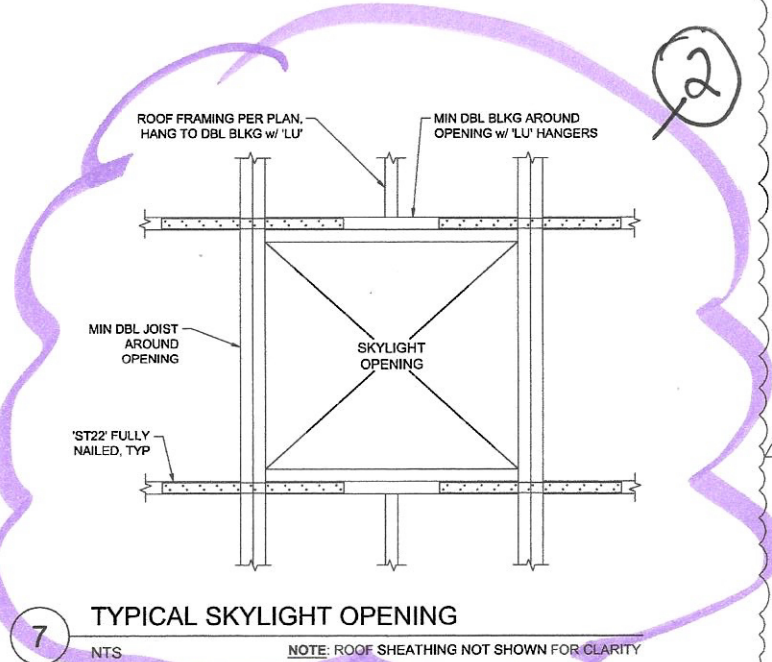
BEAM TIEDOWN SCHEDULE						
MARK	VG/	HOLDOWN	ANCHOR	MINIMUM BEAM WIDTH	MINIMUM POST SIZE	CAPACITY (LBS)
A	VG/RL	HDU2	3/8" Ø	3"	4x4	2225
B	2 - VG/RL	2 - HDU2	2 - 3/8" Ø	3"	4x4	5545
C	VG/	HDU2	3/8" Ø	3"	4x4	3075
D	VG/	HDU4	3/8" Ø	3"	4x4	4565
E	2 - VG/	2 - HDU2	2 - 3/8" Ø	3"	4x4	6150
F	2 - VG/	2 - HDU4	2 - 3/8" Ø	4 1/2"	4x6	8890



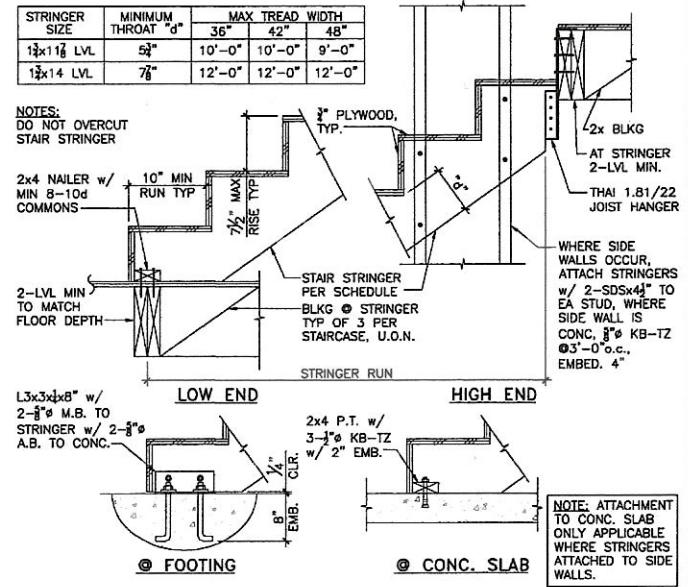
6 BEAM TO HOLDOWN POST
NTS



3 MINOR OPENINGS IN SHEARWALL
NTS



7 TYPICAL SKYLIGHT OPENING
NTS
NOTE: ROOF SHEATHING NOT SHOWN FOR CLARITY



4 TYPICAL INTERIOR STAIRS
NTS

Rev.	Issue	Date
	PERMIT	12/09/2024
1	PLAN CHECK	02/10/2025
2	FIELD REVISION	10/29/2025



Project #: 24009
Project Lead: David Yadegar
email: david@simplengi.com
Project Designer: Jon Mendez
email: jon@simplengi.com
Issue Date: 10/29/2025
Drawing Scale: 1/2"=1'-0"

LOWER FLOOR FRAMING
AND FOUNDATION PLAN

S2.0

FOUNDATION NOTES

- ALL SILL PLATES TO BE ANCHOR BOLTED AT 48" o.c. MAX. SEE 2/S1.0
 - FOR HOLDOWN INSTALLATION AT (N) FOOTING SEE 6/S1.0.
 - ALL (N) EXTERIOR WALLS SHALL BE, AT MINIMUM, 2x4 STUDS @ 16" o.c., S.A.D.
 - ALL (N) EXTERIOR WALLS SHALL BE BUILT PER TYPE 1 SHEAR WALL U.O.N.
 - FOR SHEAR WALL TYPES 2-7, PROVIDE 3x STUDS, PLATES AND BLOCKING AT ADJOINING PANEL EDGES PER SWS, SEE 2/S1.0.
 - FOR GENERAL NOTES SEE SHEET S0.
 - FOR TYPICAL DETAILS SEE SHEETS S1.0 - S1.2.
 - FOR CUSTOM DETAILS SEE SHEETS S3.0 - S3.1.
 - IF (E) CONDITIONS DO NOT MATCH THOSE SHOWN ON PLANS OR DETAILS, CONTACT ENGINEER BEFORE PROCEEDING.
 - WATERPROOFING, DRAINAGE, AND VENTILATION BY OTHERS.
11. DENOTES POST AND HOLDOWN PER HOLDOWN SCHEDULE
12. DENOTES SHEAR WALL PER SHEAR WALL SCHEDULE
13. (N) FOUNDATION STEM WALLS SHALL NOT BE DISRUPTED BY VERTICAL PIPES THROUGH STEM WALL. NOTIFY ENGINEER IF THIS CONDITION IS REQUIRED.
14. CONTRACTOR TO V.I.F. 2'-0" MIN WIDE FTG AT POST LOCATION. IF FTG WIDTH IS LESS THAN THAT, PROVIDE ADDITIONAL CONCRETE TO GET 2'-0" MIN.

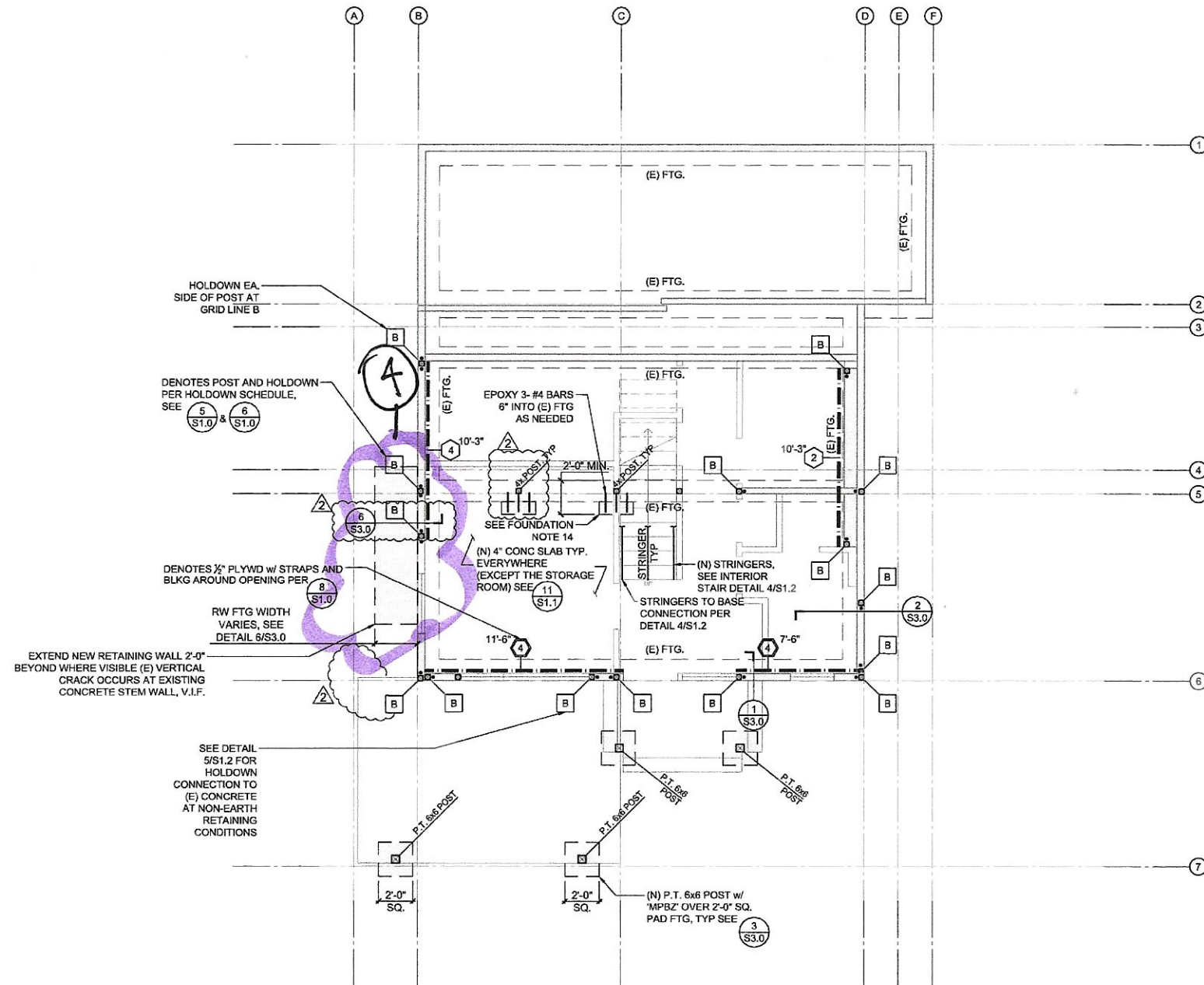
SHEAR WALL SCHEDULE (SEE 2/S1.0 FOR ADDITIONAL INFO)									
MARK	SHEATHING	FRAMING AT PLYWOOD EDGE	EDGE NAILING (EN) w/ 10d	FIELD NAILING (FN) w/ 10d	1/2" Ø A.B. FRFP OR FRFP	SDS SCREW	'A34'	'A35' LTP4' OR LTP5'	'A35' WITH PH612' SCREWS OR LS50' WITH PH612' SCREWS
1	1/2" PLYWOOD	ONE SIDE	2x	8" o.c.	12" o.c.	4'-0" o.c.	12" o.c.	10" o.c.	16" o.c.
2	1/2" PLYWOOD	ONE SIDE	3x	4" o.c.	12" o.c.	3'-2" o.c.	10" o.c.	7" o.c.	12" o.c.
3	1/2" PLYWOOD	ONE SIDE	3x	3" o.c.	12" o.c.	2'-9" o.c.	8" o.c.	5" o.c.	8" o.c.
4	1/2" PLYWOOD	ONE SIDE	3x	2" o.c.	12" o.c.	2'-0" o.c.	6" o.c.	4" o.c.	6" o.c.

HOLDOWN SCHEDULE (SEE 5/S1.0 FOR ADDITIONAL INFO)						
MARK	HOLDOWN HARDWARE	(N) CONCRETE		(E) CONCRETE		UPLIFT CAPACITY
		ANCHOR BOLT	EMBED (d _e)	ALL THREAD	EMBED (l _{e, existing})	
A	DTT2Z	-	-	-	1/2" Ø 12"	2145 LBS
B	HDU2	SSTB24	20 1/2"	-	1/2" Ø 12"	3075 LBS
C	HDU4	S8 1/2"x24	18"	-	1/2" Ø 12"	4565 LBS
D	HDU5	S8 1/2"x24	18"	-	1/2" Ø 12 1/2"	5845 LBS

SPECIAL INSPECTIONS

For questions during construction, or to schedule a special inspection item by the Engineer of Record, contact the project team listed in the titleblock.

1	INSTALLATION OF EPOXIED HOLDOWNS SHALL BE INSPECTED BY ENGINEER OR SPECIAL INSPECTOR
2	ENGINEER OF RECORD TO INSPECT REINFORCING STEEL & ANCHOR BOLT PLACEMENT PRIOR TO POUR
3	ENGINEER OF RECORD TO INSPECT PLYWOOD NAILING PRIOR TO COVERING WALLS



1 LOWER FLOOR FRAMING & FDN PLAN
1/4" = 1'-0"



BOHLEN-CASEY RESIDENCE



S2.1

1. HANGERS FOR 2x JOISTS TO BE TYPE U, LU, OR JB U.O.N. HANGERS FOR 4x OR 6x BEAMS TO BE HU U.O.N.
2. NEW HEADERS TO BE 4x6 U.O.N.
3. ALL (N) EXTERIOR WALLS SHALL BE, AT MINIMUM, 2x4 STUDS @ 16" o.c., S.A.D.
4. ALL (N) EXTERIOR WALLS SHALL BE BUILT PER TYPE 1 SHEAR WALL U.O.N.
5. FOR SHEAR WALL TYPES 2-7, PROVIDE 3x STUDS, PLATES AND BLOCKING AT ADJOINING PANEL EDGES PER SWS, SEE 2/S1.0.
6. FOR GENERAL NOTES SEE SHEET S0.
7. FOR TYPICAL DETAILS SEE SHEETS S1.0 - S1.2.
8. FOR CUSTOM DETAILS SEE SHEET S3.0 - S3.1.
9. IF (E) CONDITIONS DO NOT MATCH THOSE SHOWN ON PLANS OR DETAILS, CONTACT ENGINEER BEFORE PROCEEDING.
10. WATERPROOFING, DRAINAGE, AND VENTILATION BY OTHERS.

11. DENOTES POST AND HOLDOWN PER HOLDOWN SCHEDULE

12. DENOTES SHEAR WALL PER SHEAR WALL SCHEDULE

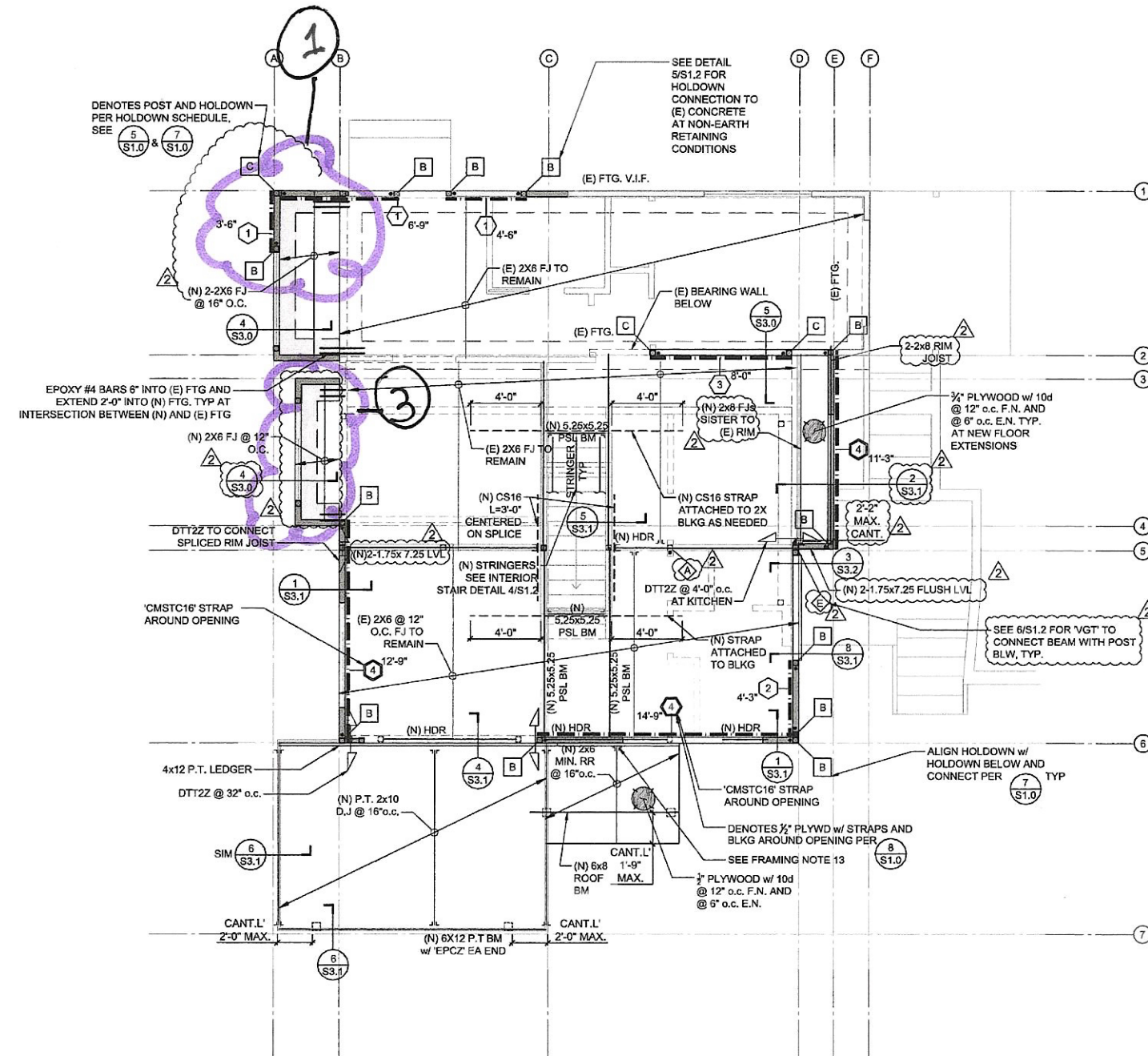
13. ROOF FRAMING AT ENTRANCE HUNG TO P.T. 2x LEDGER w/ 'LU' HANGERS. P.T. 2x LEDGER w/ 5/8" Ø THRU-BOLT TO RIM JOIST AND 1/2" Ø x 4 1/2" LAG SCREW TO TOP PLATES @ 16" o.c.

SHEAR WALL SCHEDULE (SEE 2/S1.0 FOR ADDITIONAL INFO)									
MARK	SHEATHING	FRAMING AT PLYWOOD EDGE	EDGE NAILING (EN) w/ 10d	FIELD NAILING (FN) w/ 10d	3/4" S.A.S. "URFP OR "FRFP"	SDS SCREW	"A3"	"A3S" "LTPS" OR "LTPS"	"A3S" WITH "PH812" SCREWS OR L55 WITH "PH812" SCREWS
	(A)		(B)	(C)	(D)	(E)	(F)	(F)	(F)
①	3/4" PLYWOOD	ONE SIDE	2x	6" o.c.	4"-0" o.c.	12" o.c.	10" o.c.	16" o.c.	12" o.c.
②	3/4" PLYWOOD	ONE SIDE	3x	4" o.c.	12" o.c.	3"-2" o.c.	10" o.c.	7" o.c.	9" o.c.
③	3/4" PLYWOOD	ONE SIDE	3x	3" o.c.	12" o.c.	2"-9" o.c.	8" o.c.	5" o.c.	6" o.c.
④	3/4" PLYWOOD	ONE SIDE	3x	2" o.c.	12" o.c.	2"-0" o.c.	6" o.c.	4" o.c.	4" o.c.

HOLDOWN SCHEDULE (SEE 5/S1.0 FOR ADDITIONAL INFO)									
MARK	HOLDOWN HARDWARE	(N) CONCRETE		(E) CONCRETE		MIN POST SIZE		UPLIFT CAPACITY	
		ANCHOR BOLT	EMBED ($l_{dev,new}$)	FOOTING (F)	ALL THREAD	EMBED ($l_{dev,existing}$)	4x OPTION		3x OPTION
A	DT12Z	-	-	-	3/4" Ø	12"	2 - 2x4	2 - 2x6	2145 LBS
B	HU02	SSTB24	20 5/8"	-	3/4" Ø	12"	2 - 2x4	2 - 2x6	3075 LBS
C	HU04	SPWx24	18"	-	3/4" Ø	12"	2 - 2x4	2 - 2x6	4565 LBS
D	HU05	SBWx24	18"	-	3/4" Ø	12 1/2"	2 - 2x4	2 - 2x6	5645 LBS

For questions during construction, or to schedule a special inspection item by the Engineer of Record, contact the project team listed in the titleblock.

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3	ENGINEER OF RECORD TO INSPECT PLYWOOD NAILING PRIOR TO COVERING WALLS

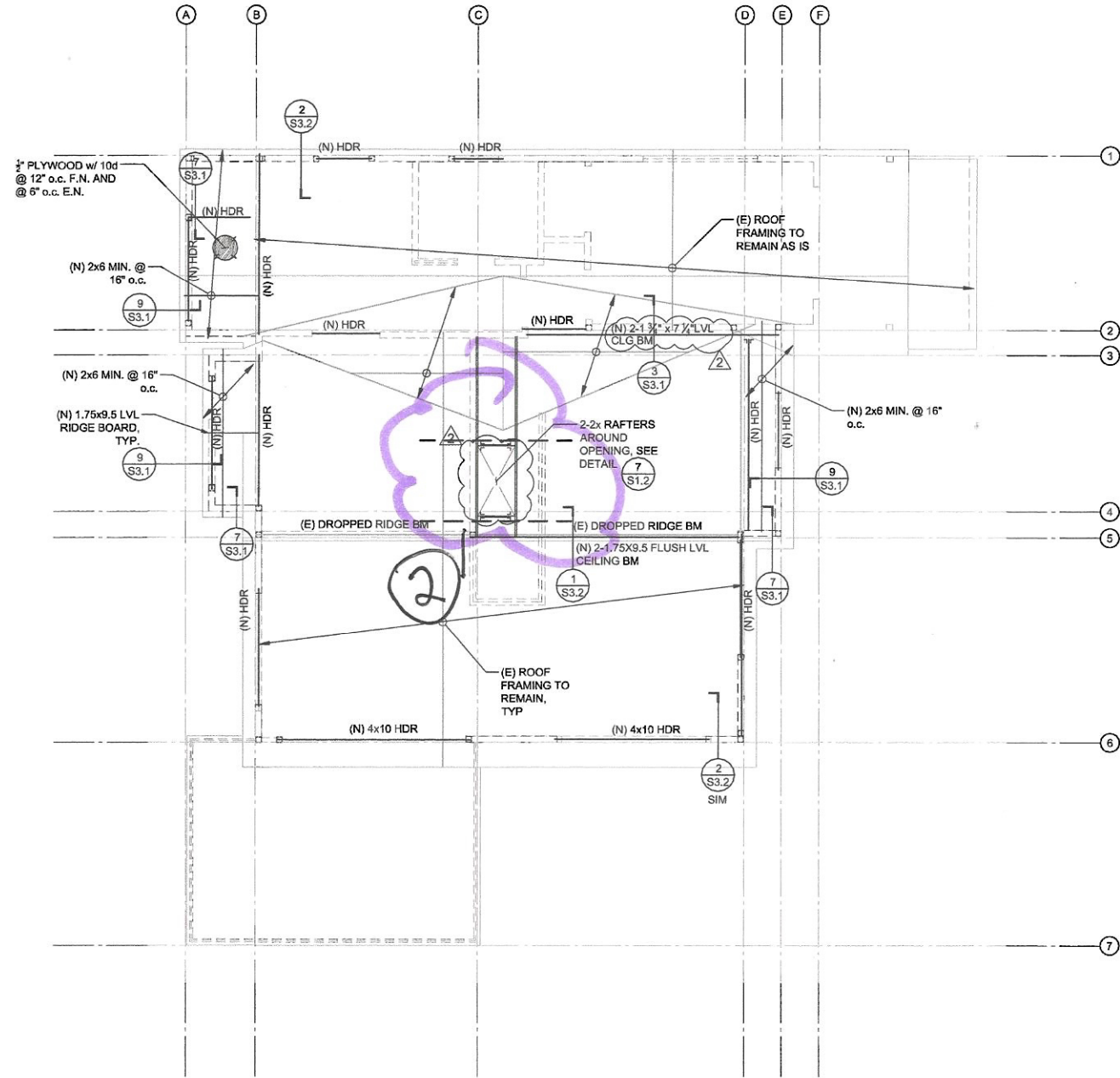


1 UPPER FLOOR FRAMING PLAN

$$1/4'' = 1'-0''$$


FRAMING NOTES

1. HANGERS FOR 2x JOISTS TO BE TYPE U, LU, OR JB U.O.N. HANGERS FOR 4x OR 6x BEAMS TO BE HU U.O.N.
2. NEW HEADERS TO BE 4x6 U.O.N.
3. ALL (N) EXTERIOR WALLS SHALL BE, AT MINIMUM, 2x4 STUDS @ 16" o.c., S.A.D.
4. ALL (N) EXTERIOR WALLS SHALL BE BUILT PER TYPE 1 SHEAR WALL U.O.N.
5. FOR SHEAR WALL TYPES 2-7, PROVIDE 3x STUDS, PLATES AND BLOCKING AT ADJOINING PANEL EDGES PER SWS, SEE 2/S1.0.
6. FOR GENERAL NOTES SEE SHEET S0.
7. FOR TYPICAL DETAILS SEE SHEETS S1.0 - S1.2.
8. FOR CUSTOM DETAILS SEE SHEET S3.0 - S3.1.
9. IF (E) CONDITIONS DO NOT MATCH THOSE SHOWN ON PLANS OR DETAILS, CONTACT ENGINEER BEFORE PROCEEDING.
10. WATERPROOFING, DRAINAGE, AND VENTILATION BY OTHERS.



1 ROOF FRAMING PLAN
1/4" = 1'-0"

BOHLEN-CASEY RESIDENCE

Rev.	Issue	Date
	PERMIT	12/09/2024
1	PLAN CHECK	02/10/2025
2	FIELD REVISION	10/29/2025



Project #:	24009
Project Lead:	David Yadegar
email:	david@simplengi.com
Project Designer:	Jon Mendez
email:	jon@simplengi.com
Issue Date:	10/29/2025
Drawing Scale:	1/4"=1'-0"

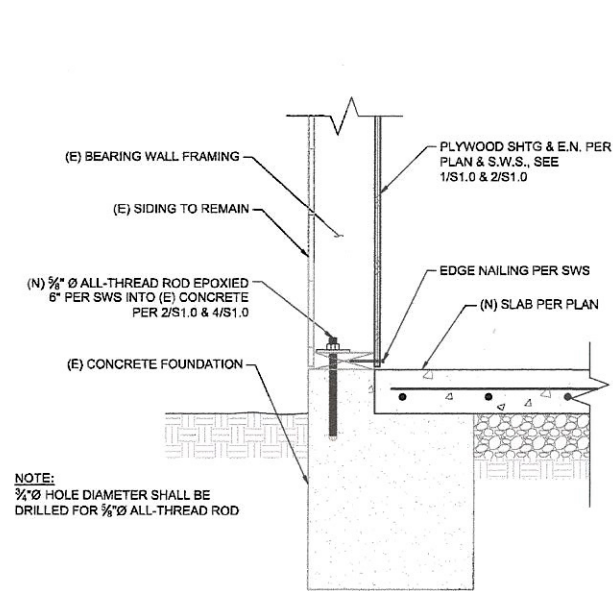
Rev.	Issue	Date
	PERMIT	12/09/2024
1	PLAN CHECK	02/10/2025
2	FIELD REVISION	10/29/2025



Project #: 24009
Project Lead: David Yadegar
email: david@simplengi.com
Project Designer: Jon Mendez
email: jon@simplengi.com
Issue Date: 10/29/2025
Drawing Scale: 1/2"=1'-0"

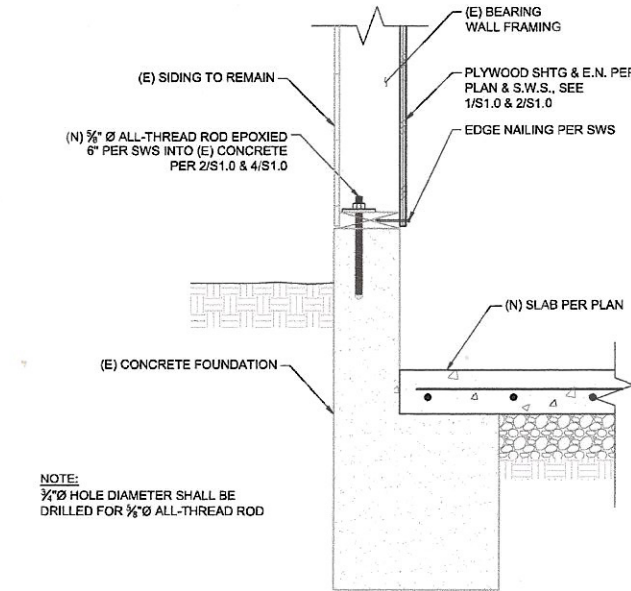
CUSTOM DETAILS

S3.0



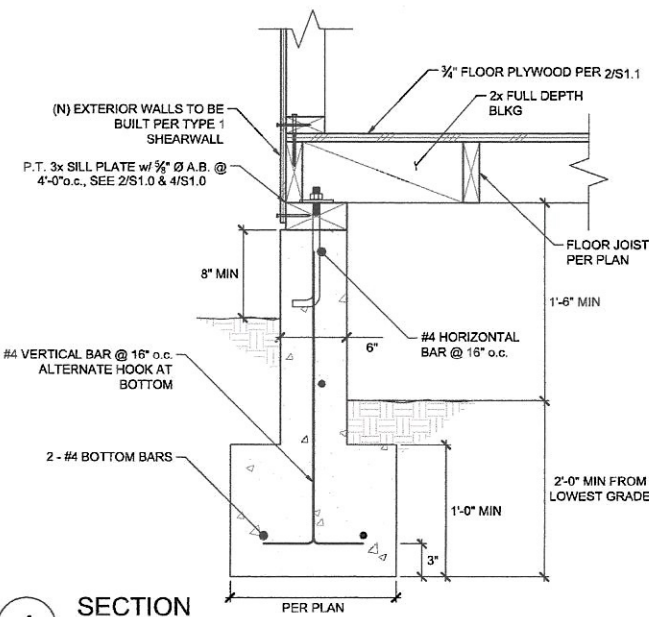
SECTION

1-1/2" = 1'-0"



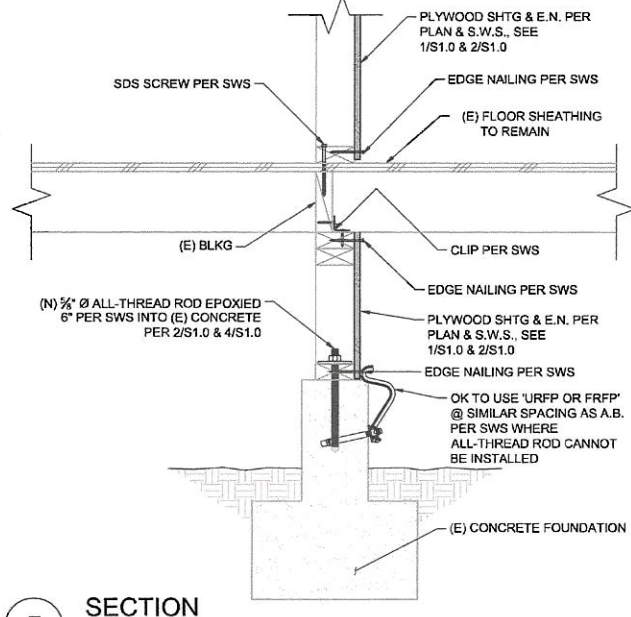
SECTION

1-1/2" = 1'-0"



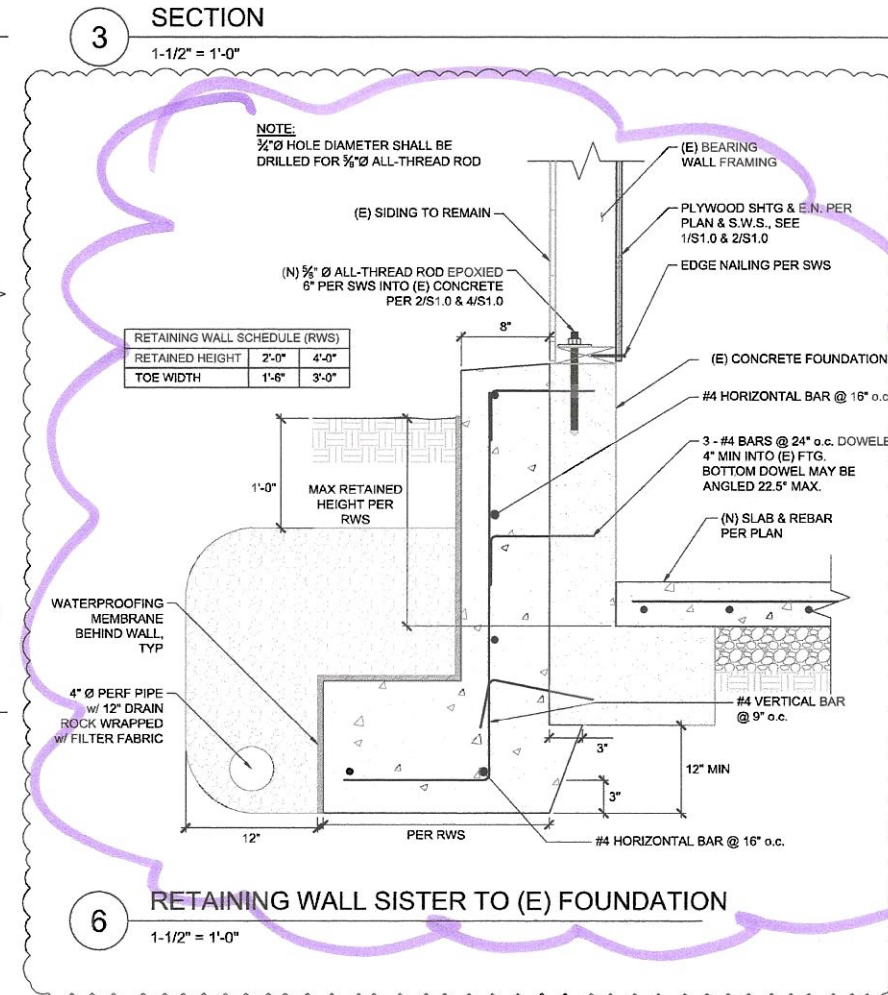
SECTION

1-1/2" = 1'-0"



SECTION

1-1/2" = 1'-0"

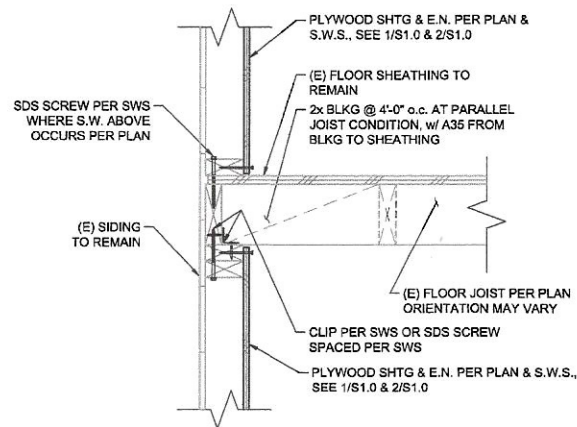


SECTION

1-1/2" = 1'-0"

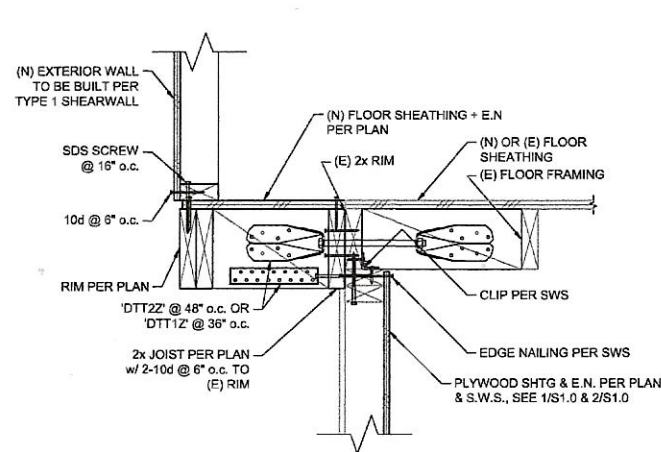
RETAINING WALL SISTER TO (E) FOUNDATION

4



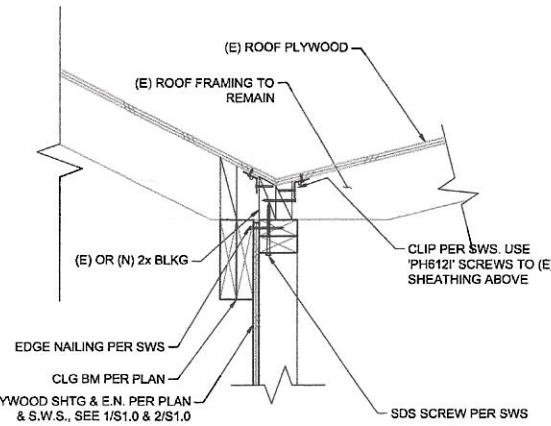
1 SECTION

1-1/2" = 1'-0"



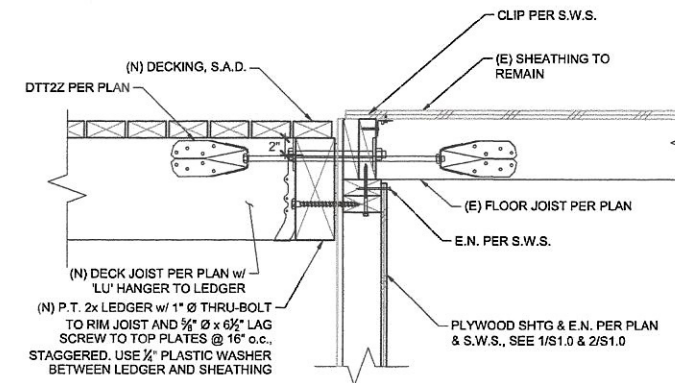
2 SECTION

1-1/2" = 1'-0"



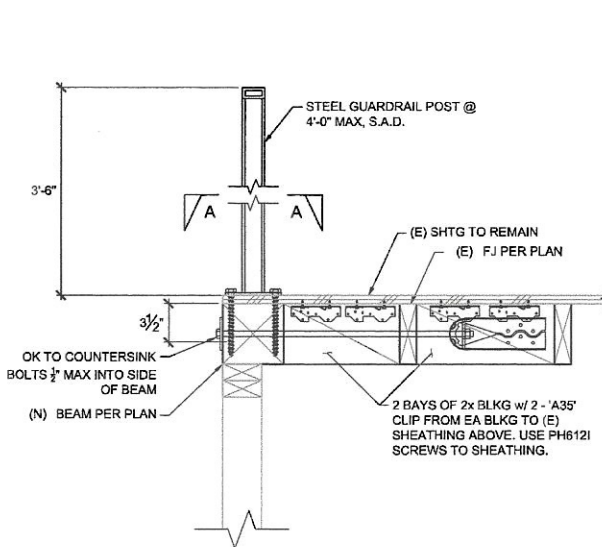
3 SECTION

1-1/2" = 1'-0"



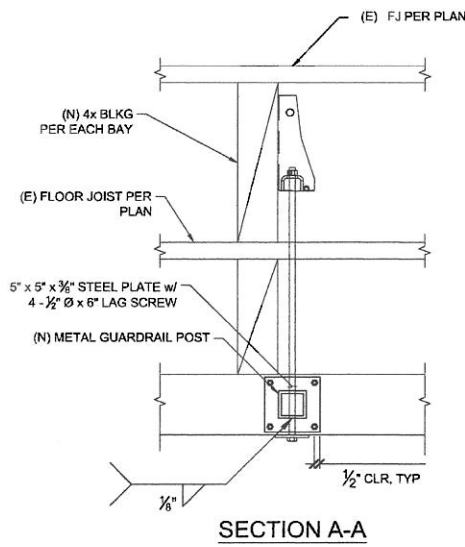
4 SECTION

1-1/2" = 1'-0"

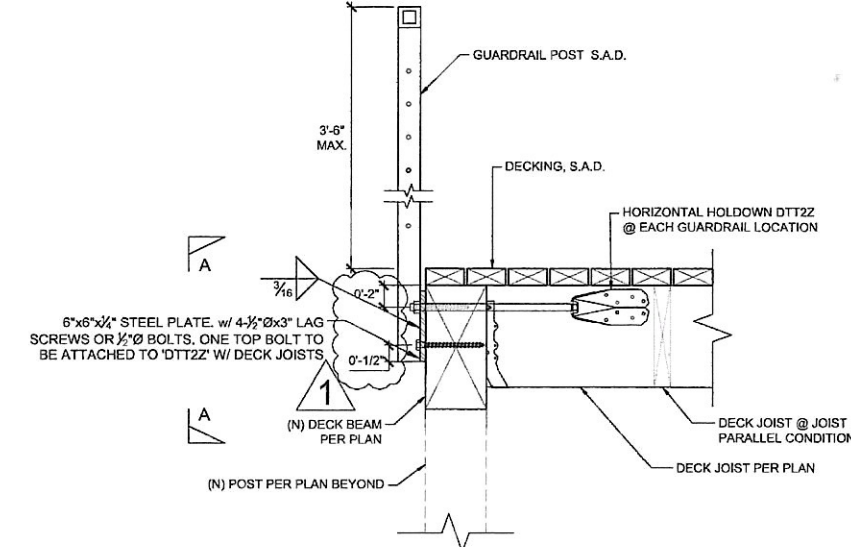


5 SECTION

1-1/2" = 1'-0"

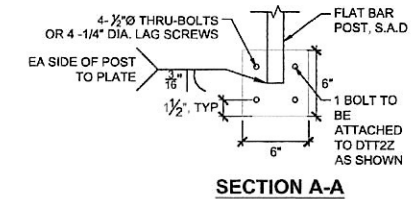


SECTION A-A

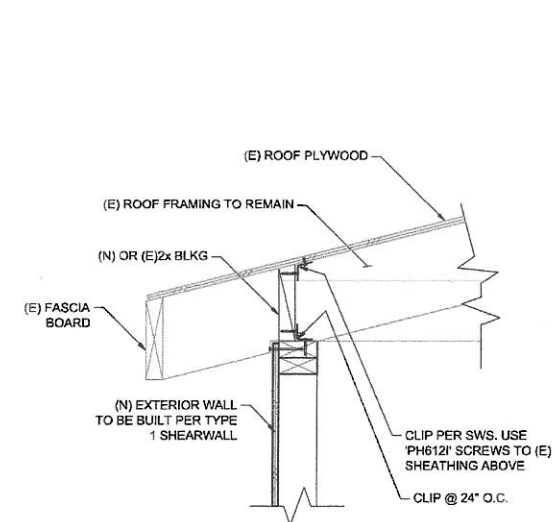


6 SECTION

1-1/2" = 1'-0"

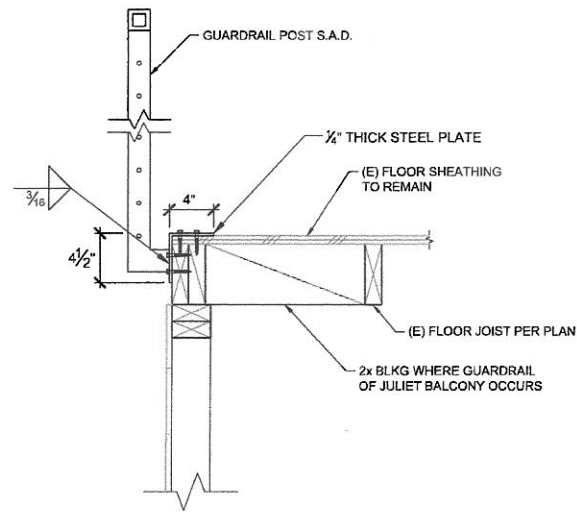


SECTION A-A



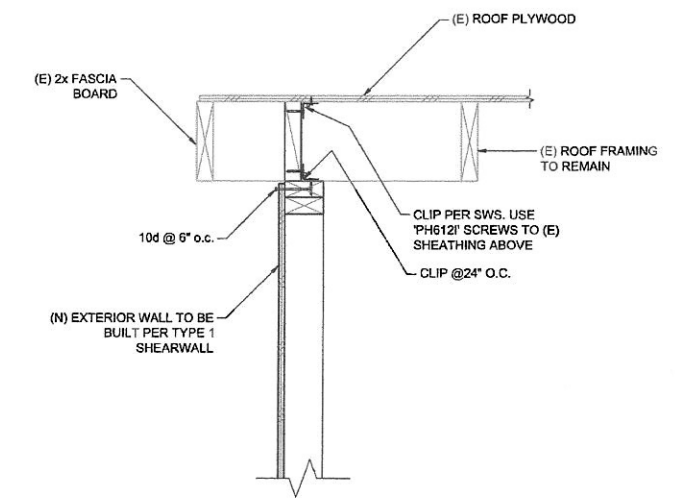
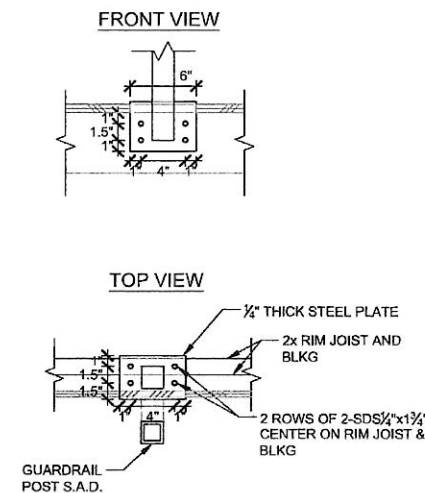
7 SECTION

1-1/2" = 1'-0"



8 SECTION

1-1/2" = 1'-0"



9 SECTION

1-1/2" = 1'-0"

Rev.	Issue	Date
	PERMIT	12/09/2024
1	PLAN CHECK	02/10/2025
2	FIELD REVISION	10/29/2025

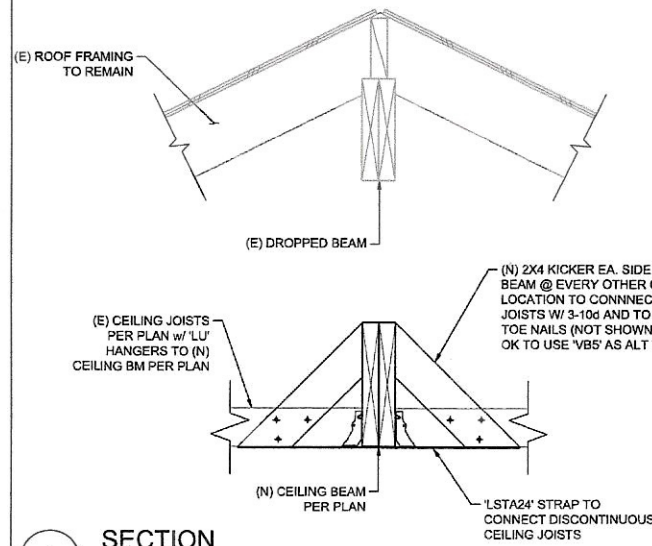


Project #:	24009
Project Lead:	David Yadeag
email:	david@simplengi.com
Project Designer:	Jon Mendez
email:	jon@simplengi.com
Issue Date:	10/29/2025
Drawing Scale:	1/2" = 1'-0"

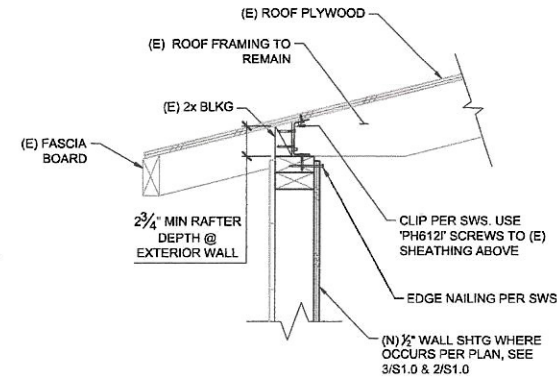
CUSTOM DETAILS

S3.1

BOHLEN-CASEY RESIDENCE

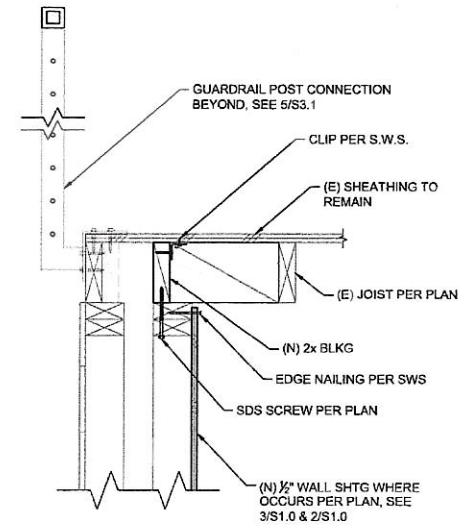


1 SECTION
1-1/2" = 1'-0"



NOTE:
CEILING JOIST NOT SHOWN
FOR CLARITY

2 SECTION
1-1/2" = 1'-0"



3 SECTION
1-1/2" = 1'-0"

Rev.	Issue	Date
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CUSTOM DETAILS

S3.2